ORDER NO. VRD-8505-125

Service Manual

Video Cassette Recorder

Panasonic VHS NTSC Hi-Fi

NV-870PX

General Description
Adjustment Procedures
Block/Schematic Diagrams
Exploded Views/Parts List

SPECIFICATIONS

Power Source:		100～120/220～240 V, AC 50/60 Hz
Power Consumption:		Approx. 40 watts
Television System:		EIA: 525 lines, 60 fields NTSC color signal
Video Recording	System:	2 rotary heads, helical scanning system Luminance: FM azimuth recording Colour signal: converted subcarrier phase shift recording
Audio Track:		1 track (Normal), Hi-Fi 2 CH
Tape Format:		Tape width 12.7 mm high density tape
Tape Speed:		SP: 33.30 mm/sec. LP: 16.70 mm/sec. SLP: 11.10 mm/sec.
Record/Playback	Time:	SP: 120 min. with NV-T120 LP: 240 min. with NV-T120 SLP: 360 min. with NV-T120
FF/REW Time:		Less than 5 min. with NV-T120
Heads:	Video:	4 rotary heads (VR-VL Head) (VR'-VL' Head)
	Audio:	1 pair for audio Hi-Fi recording and playback (AR-AL Head)
	Audio/Control:	1 stationary head
	Erase:	1 full track erase
Input Level:	Video:	VIDEO IN connector (Phono) 1.0 Vp-p, 75 Ω terminated
	Audio:	LINE IN jack (Phono jack)×2 More than −10 dBV, 47 kΩ
	TV Tuners:	VHF CH2～CH36, CH98, CH99, 75 Ω unbalanced UHF CH14～CH83, 300 Ω balanced
Output Level:	Video:	VIDEO OUT connector (Phono) 1.0 Vp-p, 75 Ω terminated
	Audio:	LINE OUT jack (Phono jack)×2 less than −8 dBV, 1 kΩ HEADPHONE jack −26 dBV, 8 Ω
	RF Modulated:	VHF CH3 or CH4 $66^{+2}_{-2.5}$ dBμ, 75 Ω open
Weight:		8.8 kg
Dimensions:		430(W)×99(H)×366.5(D) mm
Accessory Supplied:		1 pc. UHF Antenna Cable Set 1 pc. F-type Cable 1 pc. Plug Adaptor 1 pc. Wireless Remote Controller 1 pc. Matching Box 1 pc. Audio Cable
Optional Accessories:		Video Cassette Tape: NV-T160 Approx. 327 m, 160, 320 or 480 min NV-T120 Approx. 247 m, 120, 240 or 360 min NV-T60 Approx. 127 m, 60, 120 or 180 min.

Weight and dimensions shown are approximate.
Specifications are subject to change without notice.

Panasonic

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INTRODUCTION

This service manual contains technical information which will allow service technicians to understand and service the NTSC VHS Video Cassette Recorder Model NV-870PX.
The NV-870PX has many special features as shown in page 1-1.
These features in addition to the basic NTSC VHS Format make the unit an ideal one for your culture and entertainment.

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SECTION 1

GENERAL DESCRIPTION

1-1. FEATURES

1. Hi-Fi Stereo System

The revolutionary newly developed hi-fi stereo recording system features two rotary audio heads arranged on the video head cylinder and an FM conversion recording method. The result of this innovative system is superb sound quality with a dynamic range of 80dB, wide frequency response from 20Hz to 20kHz.

2. Recording and Playback of Stereo, Audio II and Monaural TV Program

By connecting an optional Stereo TV Module (Stereo TV/ Separate Audio-Program Adaptor) to the MPX Out Jack, recording of TV programs with stereo or audio II (second language) sound is possible, and the desired sound version can be selected for playback.

3. Recording and Playback of "Simulcast" Sound

This VTR allows recording and playback of the stereo sound of TV programs broadcast via "Simulcast" by connecting an FM tuner to the Audio Input Sockets.

4. Use as a High-Quality Audio Cassette Recorder

The excellent audio quality, outstanding tape economy, continuous 8-hour recording capability, Audio Rec Level Control and Audio Rec Level Meter make this VTR ideal for use as a top-quality audio cassette recorder.

5. Tape Programme Search System (Using Mono Track)

By pushing the Audio Rec Mute Button for at least 4 seconds at the beginning of every recording, this tape program search system enables fast and automatic locating of the start of the next program in forward or reverse direction. As soon as the beginning of the program is found, playback will start immediately. Locating a desired program is easy and fast.

6. Field Still, Field Advance and Field Fine Slow Playback

Field Still, Field Advance and Field Fine Slow Playback are possible with superb picture quality free from noise and jitter. (SP and SLP)

7. Slim Design and Front Loading System

This highly functional design allows loading of the video cassette from the front, thus minimizing the space required for the placement.

8. Multi-Function Display

Whenever an operation button is pressed, the activated function is immediately indicated on this easy-to-see display. It shows you at a glance, in what operation mode the VTR is functioning.

9. 14-Day, 8-Programme Timer

The built-in timer allows automatic absentee recording of up to 8 TV programs within 14 days. It is also possible to record a program which is broadcast at the same time every day or every week.

10. Wireless Remote Controller

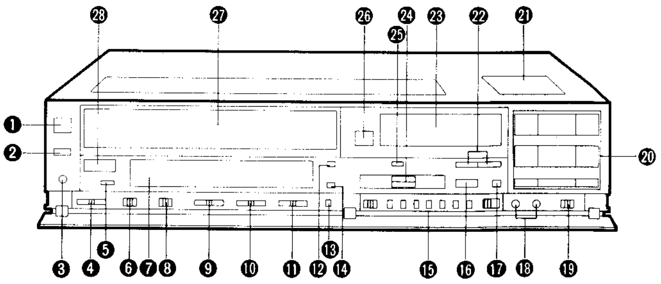
The Wireless Remote Controller unit allows operation of various functions from the comfort of your favorite viewing position.

11. Auto Voltage Selector

This unit is equipped with an Automatic Voltage Selector. The unit can be used where the local voltage indication is between 110 ~ 120V or 220 ~ 240V, without any manual voltage adjustment.
If your local voltage is between 220 ~ 240V, use the supplied power plug adaptor (VJSS0070).

1-2. CONTROLS AND COMPONENTS

TOP AND FRONT



❶ **Power On/Off Switch**

❷ **Eject Button**
Push to this button to remove the cassette.

❸ **Headphones Jack**

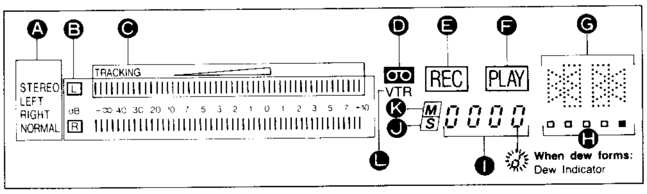
❹ **Headphones Level Control**
When using headphones, the volume level can be adjusted with the Headphones Level Control.

❺ **Audio Playback Mode Selector Button**
Push this button until the Sound Track Indicator of the desired sound mode lights up.

❻ **Audio Level Meter Selector Button**
Selecting this switch, the Audio Level Meter displays the audio recording level or condition of the Hi-Fi tracking.

Audio Playback Mode / Sound Track Indicators	Playback of Programs Recorded on the NV-870 (or another VHS Hi-Fi Video Recorder)	Playback of programs Recorded on a Conventional VHS Steror Video Recorder
LEFT	left Channel	——
STEREO	Left+Right Channels (Stereo)	——
RIGHT	Right Channel	——
NORMAL	Left+Right Mixed	Left+Right Mixed

⑦ **Multi Function Display**



- Ⓐ Audio Track Indicators
- Ⓑ Audio Rec Level Meter
- Ⓒ Hi-Fi Tracking Meter
- Ⓓ Cassette-in Indicator
- Ⓔ Recording Indicator
- Ⓕ Playback Indicator
- Ⓖ Tape Running Display
- Ⓗ Slow Speed Indicators
- Ⓘ Tape Counter
- Ⓙ Tape Program Search Indicator
- Ⓚ Memory Indicator
- Ⓛ VTR/TV Indicator

⑧ **Audio Rec Level Control Selector Switch**
Set the Audio Level Meter Selector Switch to "Audio Level" and this switch to "Manual" and adjust the recording volume with the Audio Rec Level Control.
Control while observing the Audio Level Meters. (It is recommended to adjust so that peaks in the audio level reach about 3dB). When this switch to "AGC", the recording level is automatically adjusted.

⑨ **Tracking Control**

Normal Playback: Adjust the Tracking Control on the VTR if the image is partially obscured by bands of noise.

Hi-Fi Sound Playback: This may be necessary, if the recording was made on another Hi-Fi VHS video recorder. Set the Audio Level Meter Selector Switch to "Hi-Fi Tracking" and slowly slide the Tracking Control while observing the Audio Level Meter, to adjust for highset possible meter Indication.

⑩ **Slow Tracking Control**

When noise bars appear during Field Still, Field Still Advance or Field Fine Slow motion playback, revert to Slow-motion playback and slide the Slow Tracking Control to the left or right to reduce the noise bars. Then resume the required mode.
If may not be possible to eliminate the noise bars completely.

⑪ **Picture Sharpness Control**
The picture sharpness control enables the playback picture to be adjusted so that its outlines are made sharper or softer. It has no effect when recording.

⑫ **Reset Button**
Push the Reset button to reset the Counter of Multi-Function Display to "0000".

⑬ **Tape Speed Selector**
For recording either of three tape speeds can be selected. During playback the recorder selects automatically the correct speed.
Select the desired tape speed with the Tape Speed Selector before recording.
Set to the "SP" position for normal speed.
Set to the "LP or SLP" position for slow speed.
The corresponding indicator lights up during recording and playback.

⑭ **Memory/Search Button**
The convenient tape program search function of this VTR locates blank spaces in the mono normal audio track (that mark the beginning of the programs) during Cue or Review playback. As soon as the next blank space is reached, the playback will start automatically if the search was started from the playback mode. If it was started from the still mode, the VTR will be stopped in the still playback mode.

1. Push the Audio Rec Mute button for more than 4 seconds during recording to mark the beginning of a program.
2. Push the Memory/Serch Button twice. The indication "S" appears on the Multi-Function Display.
3. Push the Play Button (or the Playback and Pause/Still Buttons).
4. Push the Rewind/Review button or Fast Forward Button to start the Tape Programme Search function.
   The tape programme search without sound reproduction will start.

⑮ **Timer Controls**
The timer controls are used to set the clock for the present time and to program start and stop for timer recording.

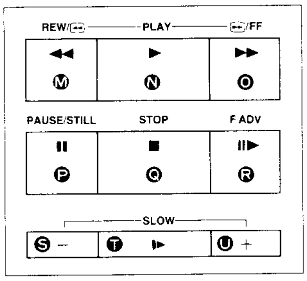
⑯ **Record Button**
Push to start recording.

⑰ **Audio Rec Mute Button**
Push the Audio Rec Mute Button when indexing the tape for Tape Program Search, refer to the description of the Memory/Search Button ⑭ .

⑱ **Microphone Input Jack (L/R)**

⑲ **Input Signal Selector Switch**
For selecting the input signal to be recorded.

⑳ **Tape Running Controls**



- Ⓜ Rewind/Review Button
- Ⓝ PLAY Button
- Ⓞ Fast Forward/Cue Button
- Ⓟ Pause/Still Button
- Ⓠ Stop Button
- Ⓡ Still Advance Button
- Ⓢ Slow (−) Button
- Ⓣ Slow Button
- Ⓤ Slow (+) Button

㉑ **Tuner Set-up Controls**
Tuning control for the any broadcast channel in your area.

㉒ **Channel Selection Up and Down Buttons**
Push the desired channel selector buttons to select the channel you wish to view or record.

㉓ **Timer Display**
Indicates either the timer/day or recording start/stop times for the timer recording.

㉔ **Audio Rec Level Control**
The recording level for the right and left channel can be adjusted individuall.
Manual adjustment of the audio recording level is only possible for the sound which is to be recorded on the hi-fi audio tracks. The sound to be recorded on the "normal" sound track cannot be adjusted with the Audio Rec Level Control, because it is preset by design.

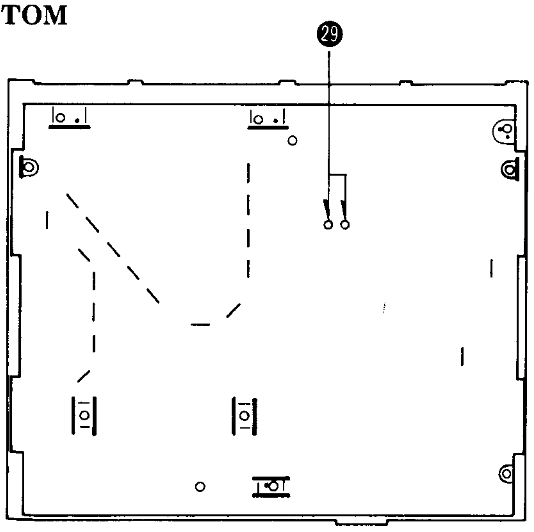
㉕ **VTR/TV Selector**
Select the signal to be viewed on your TV.
VTR: To view playback picture or to see the picture you are recording.
TV: To use your TV as you normally would or to view another TV program while you are recording one TV program.

㉖ **Wireless Remote Control Receiver**
Receiving the Wireless Remote Control signal.

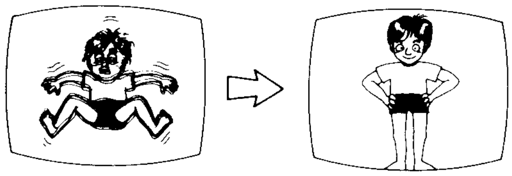
㉗ **Cassette Compartment**

㉘ **Tape Speed Indicator (SP/LP/SLP)**

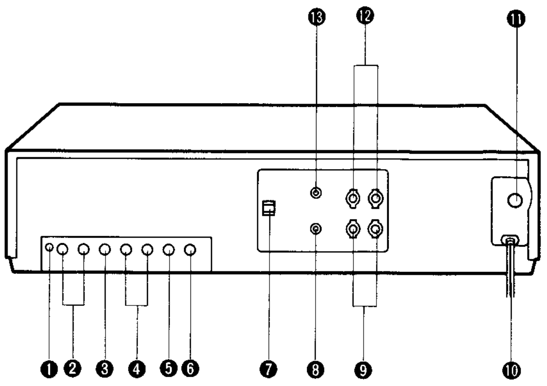
BOTTOM



㉙ **V-Lock**
If a vertical jitter appears on the TV monitor in Still, Still-Advance or Slow mode, adjust the V-lock control at the best position so that the picture can be stabilized.
Once you adjust this control, no more adjustment is required unless you change the connected TV receiver.



REAR



❶ **Camera Remote Control Socket**
For connecting the remote control cable of a video camera (optional).

❷ **Audio Input Jack (L/R)**
For connecting the audio cable of a video camera or an output audio signal of another VTR.

❸ **Video Input Jack**
For connecting the video cable of a video camera or an output video signal of another VTR.

❹ **Audio Output Jack (L/R)**
For connecting an audio cable of a TV monitor, or another VTR.

❺ **Video Output Jack**
For connecting a TV monitor or another VTR. Not used with an ordinary TV.

❻ **TV Multiplex Output Jack**

❼ **RF Converter Channel Selector**
For adjusting the built-in RF Converter to channel which is not used for broadcasting in your area.

❽ **VHF Antenna Input Connector (FROM ANTENNA)**

❾ **UHF Antenna Input Terminals (FROM ANTENNA)**

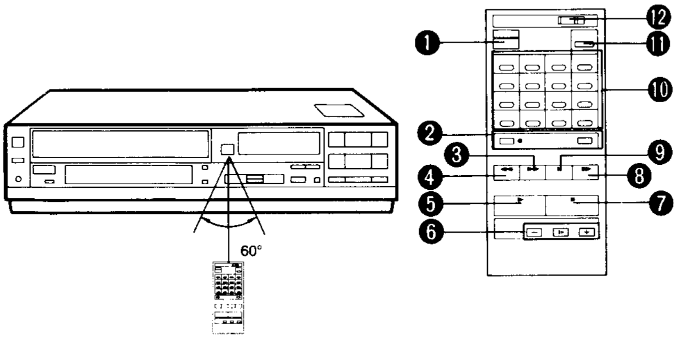
❿ **AC Power Cord**

⓫ **Auxiliary Connector**
For connecting a CATV Converter (Panasonic PV-CT2 or similar).

⓬ **UHF Antenna Output Terminals (TO TV SET)**

⓭ **VHF Antenna Output Connector (TO TV SET)**

INFRARED REMOTE CONTROLLER



❶ **Power On/Off Button**
For turning the Power on and off.

❷ **Record Buttons (●)**
To start recording, push the two buttons simultaneously.

❸ **Fast Forward ▶▶ /Cue ▶▶ Button**
When this button is kept pushing during playback, the VTR changes over to the Cue playback mode.

❹ **Rewind ◀◀ /Review ◀◀ Button**
When this button is kept pushing during playback, the VTR changes over to the Review playback mode.

❺ **Play Button (▶)**

❻ **Slow Button (|▶)**
Push the Slow Button for slow-motion playback at 1/10 of normal speed. The slow playback speed can be varied between 1/30 and 1/5 of normal speed by using the "+" and "−" Buttons.

Note:
If the VTR is left in the slow playback mode for more than 10 minutes, the VTR will automatically switch over to the stop mode, to protect the tape and the video heads.
- Adjust the Slow Tracking Control if necessary.

❼ **Stop Button (■)**

❽ **Field Advance Button (||▶)**

❾ **Pause/Still Button (||)**

❿ **Programme Position (Channel) Selector Buttons**

⓫ **VTR/TV Selector Button**

⓬ **Remote Controller On/Off Switch**

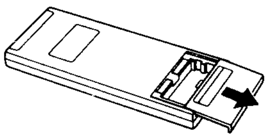
Power Source of the Wireless Remote Controller

■ The Wireless Remote Controller is powered by two "AA" size batteries. The life of the batteries is about one year, however, it depends on the frequency of use. Inspect and if necessary, replace the batteries once a year.

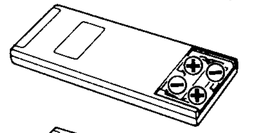
CAUTION FOR BATTERY REPLACEMENT

- Load the new batteries with their polarities (⊕ and ⊖) aligned correctly.
- Do not heat, disassemble or short-circuit the old batteries.
- If you do not intend to use the Remote Controller for a long period of time, remove the batteries and store them in a cool and dry place.
- Remove spent batteries immediately and dispose of them.
- Do not use an old and a new battery together. (Also never use an alkaline battery with a manganese battery.)

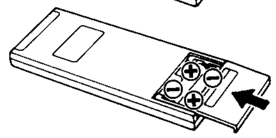
Load the batteries as follows:



1. Remove the battery compartment lid.



2. Place two batteries in the battery compartment as indicated inside the battery compartment.



3. Replace the lid.

Note:
- The infrared beam should be transmitted directly to the wireless Remote Control Receiver on the front of the VTR.
- Direct sunlight may interfere with the beam.
- The lightsensing angle of the Wireless Remote Control Receiver window in the VTR is about 60°.

SECTION 2
ADJUSTMENT PROCEDURE

2-1. MECHANICAL ADJUSTMENT PROCEDURES

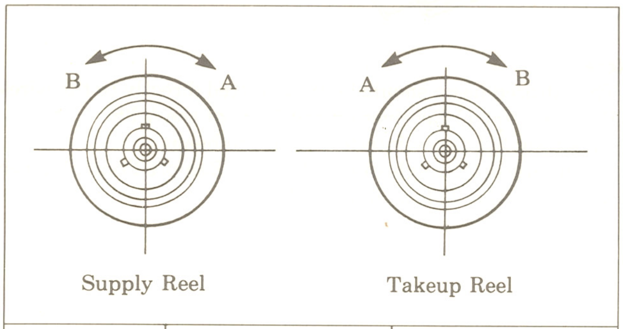
The mechanism used in this model is the same with one of model PV-1631M (Order No. VRD-8408-615), therefore please refer to Mechanical Adjustment section of above manual for servicing the mechanical maintenances/adjustments except items listed below.

2-1-1. CONFIRMATION OF BRAKE TORQUE
2-1-2. CONFIRMATION OF TAKE-UP TORQUE
2-1-3. ADJUSTMENT OF REVIEW TORQUE

2-1-1. CONFIRMATION OF BRAKE TORQUE

* **Equipment Required:**
Torque Gauge (VFK0133)
Adaptor for Gauge (VFK0134)

* **Specification:**



	A	B
Takeup	more than 400 g-cm	70 ~ 150 g-cm
Supply		95 ~ 185 g-cm

Fig. 1 Spec. of Brake Torque

1. Remove the cassette compartment.
2. Attach the adaptor to the torque gauge and place the deck in STOP mode.
3. Place the torque gauge on the reel table.
   The weight of gauge should be free against the reel table.

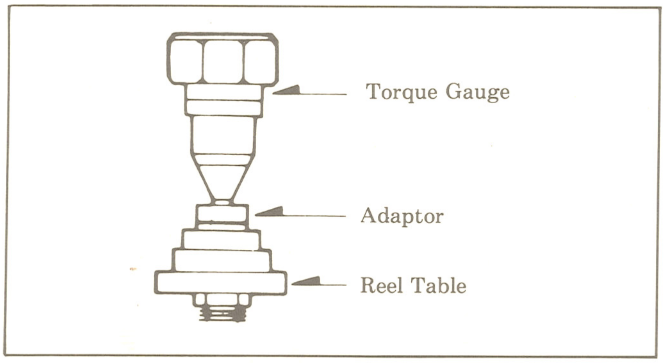


Fig. 2

4. Turn torque gauge in the direction indicated in Fig. 1 until the brake begins slipping.

2-1-2. CONFIRMATION OF TAKE-UP TORQUE

* **Equipment Required:**
Dial Gauge (VFK0133)
Adaptor for Gauge (VFK0134)

* **Specification:**
PLAY mode .... 105 ~ 155 g-cm
FF mode .... more than 350 g-cm
REW mode .... more than 350 g-cm

1. Remove the cassette compartment. Do not disconnect the connection cable from the Front Loading Motor.
2. Insert a cassette tape and attach the adaptor to the torque gauge.
3. Set a torque gauge to the Take-up Reel Table, and then push the PLAY button and read a torque gauge. Also perform for FF mode by pushing the FF button.
4. Set a torque gauge to the supply Reel Table, and push the REW button and read a torque gauge.

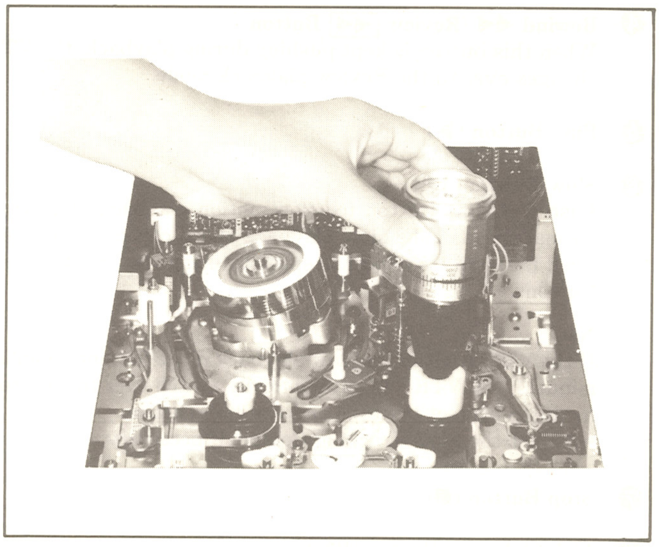


Fig. 3

Note:
While measuring, the weight of torque gauge should not rest on reel table.

2-1-3. ADJUSTMENT OF REVIEW TORQUE

* **Equipment Required:**
Dial Gauge (VFK0133)
Adaptor for Gauge (VFK0134)

* **Specification:**
Review mode .... 200 ± 35 g-cm

1. Remove the cassette compartment. Do not disconnect the connection cable from the Front Loading Motor.
2. Insert a cassette tape and attach the adaptor to the torque gauge.

3. Set a torque gauge to the Supply Reel Table, and then push the PLAY button and REW button for REVIEW mode. (If the unit enters the Auto-Stop mode, the take-up reel sensor functions. Manually keep rotating the take-up reel table while reading the torque gauge.)

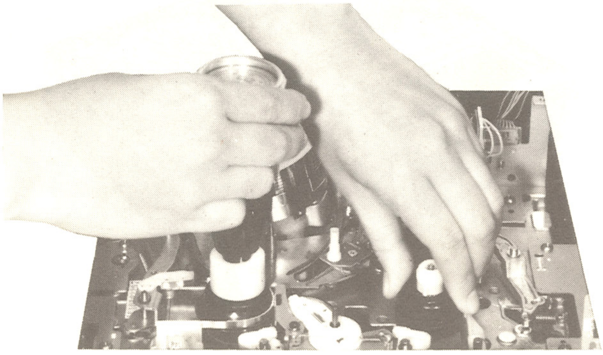


Fig. 4

4. Read a torque gauge.
5. If it is out of spec., change the spring notch.

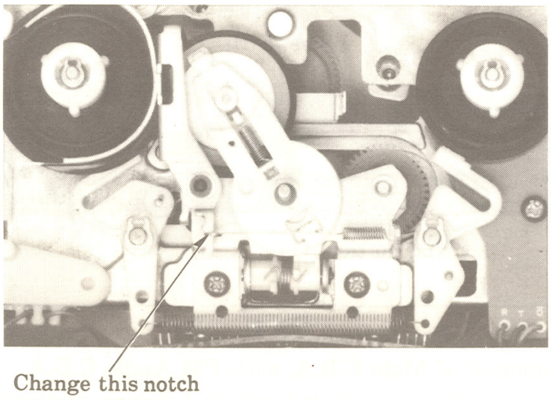

Change this notch

Fig. 5

2-2. DISASSEMBLY METHOD

2-2-1. DISASSEMBLY FLOWCHART

This flowchart indicates disassembly items of the cabinet parts and P.C. Boards in order to find the item(s) necessary for servicing.
When reassembling, perform the step(s) in the reverse order.

Note:

When removing the Front Panel, work with care not for breaking the locking portions of the panel.

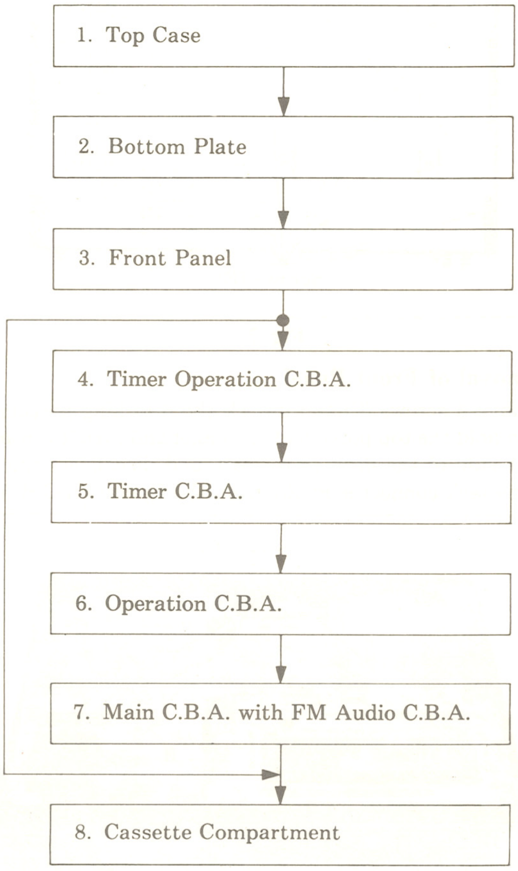

1. Top Case
2. Bottom Plate
3. Front Panel
4. Timer Operation C.B.A.
5. Timer C.B.A.
6. Operation C.B.A.
7. Main C.B.A. with FM Audio C.B.A.
8. Cassette Compartment

Fig. 2

2-2-2. DETAILED DISASSEMBLY METHOD

1. Removal of Top Case

Unscrew 4 screws (A). Then carefully lift the rear of the case to remove.

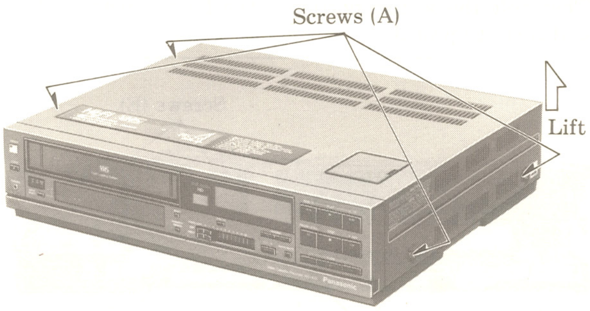

Screws (A)
Lift

Fig. 6

2. Removal of Bottom Plate

Place the deck upside down so the bottom side face upwrd. Then unscrew 8 screws (B) to remove.

Note:

Place the cushion under the deck for not being damaged the top portion of the deck.

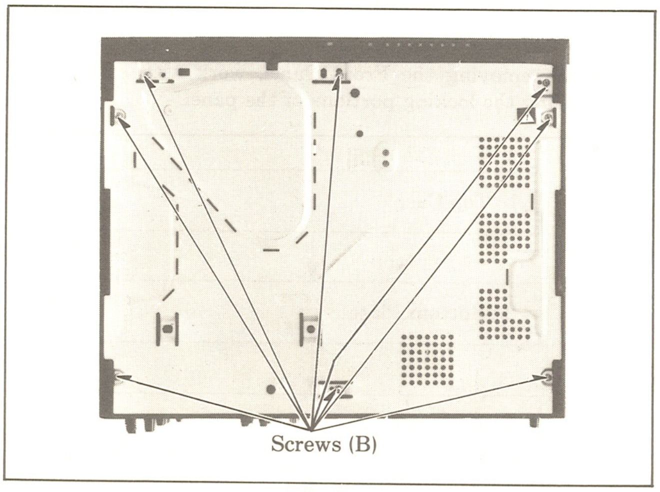


Fig. 7

3. Removal of Front Panel

Remove 3 screws (C) and unlock the 6 locking portions (D). Then hold the top portion of the panel and turn it toward the front side of the deck to remove, and disconnect the headphone jack connector P6507 from the Operation C.B.A.

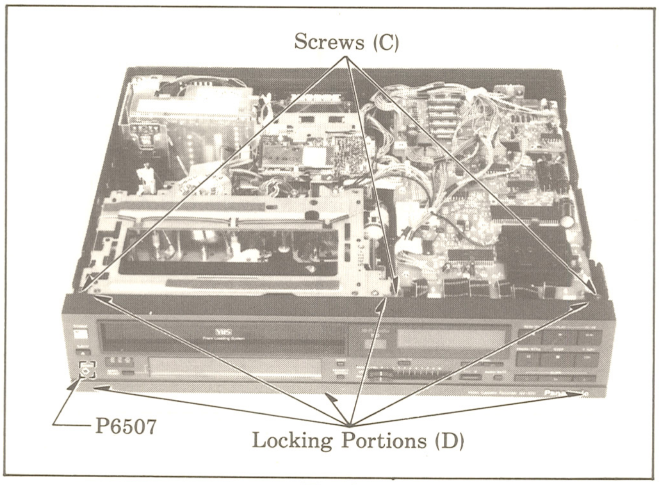

Screws (C)
P6507
Locking Portions (D)

Fig. 8

4. Removal of Timer Operation C.B.A.

Disconnect the connector P6508 from the Timer Operation C.B.A.

Unscrew 3 screws (E) and unlock 2 locking portions (F). Then hold the bottom portion of the Timer Operation C.B.A. and turn it upward.

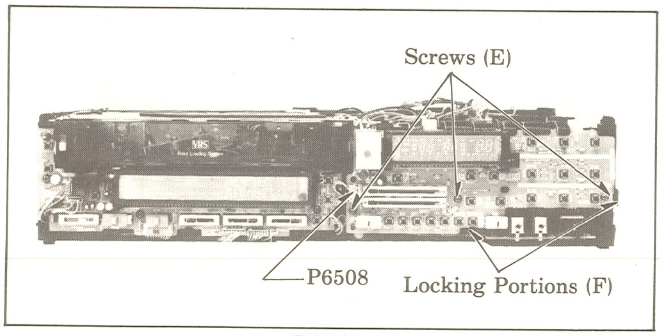

Screws (E)
P6508
Locking Portions (F)

Fig. 9

5. Removal of Timer C.B.A.

Unlock 2 locking Portions (G) and turn Timer C.B.A. toward the left side of the deck.

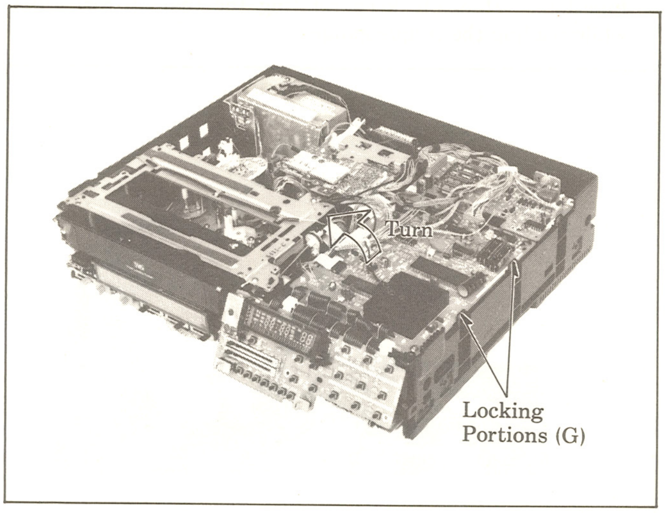

Turn
Locking Portions (G)

Fig. 10

6. Removal of Operation C.B.A.

Unscrew 3 screws (H) and 3 locking portions (I) to remove the C.B.A.

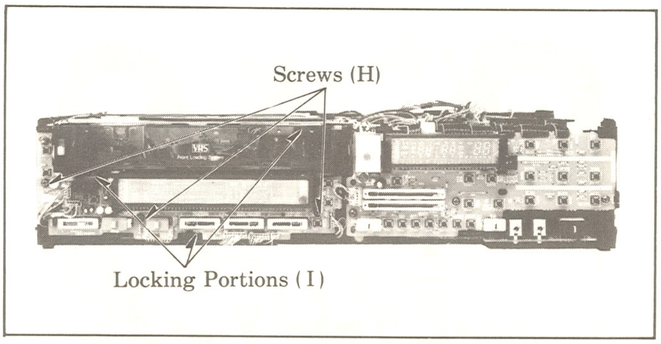

Screws (H)
Locking Portions (I)

Fig. 11

7. Removal of Main C.B.A. with FM Audio C.B.A.

Unscrew 2 screws (J) and unlock 2 locking portions (K). Then open the Main C.B.A. with FM Audio C.B.A.

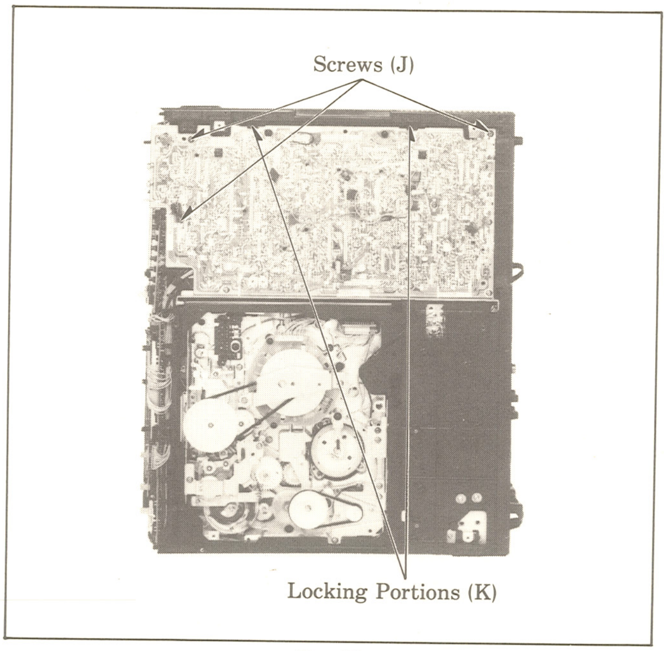

Screws (J)
Locking Portions (K)

Fig. 12

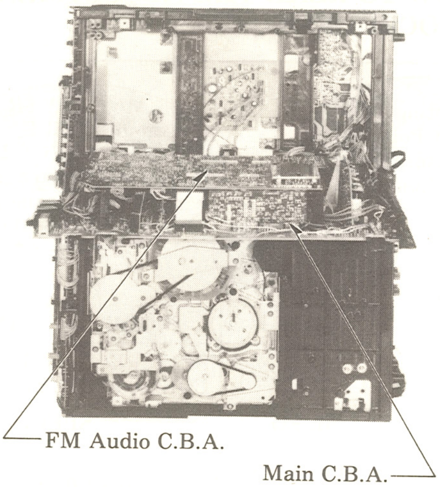

FM Audio C.B.A.
Main C.B.A.

Fig. 13

8. Removal of Cassette Compartment

Remove 2 screws (L) and disconnect the connector P1510 from the Front Loading C.B.
Then carefully pull out the Cassette Compartment.

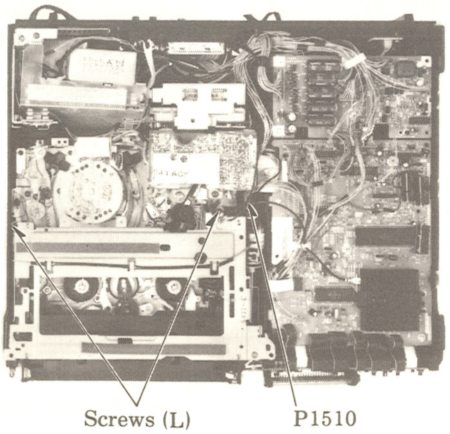

Screws (L)
P1510

Fig. 14

2-3. REPLACEMENT OF UPPER CYLINDER UNIT

Be sure to observe the following procedures when replacing the Upper Cylinder Unit.

1. Removing the Upper Cylinder Unit

First, remove two screws as shown in Fig. 15.
Then, unsolder 12 soldered portions indicated by arrows, on the Circuit Board and finally remove the Upper Cylinder Unit by lifting it upwards.

Note:

Soldered portion can be easily removed by using solder sucking wire, etc.

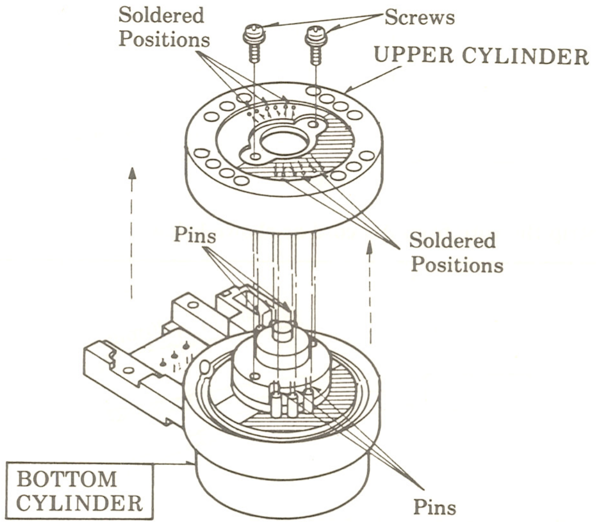

Soldered Positions
Screws
UPPER CYLINDER
Pins
Soldered Positions
BOTTOM CYLINDER
Pins

Fig. 15

2. Reinstalling the Upper Cylinder Unit

The Upper Cylinder Unit can be reinstalled by reversing the removal procedure.
However, when reinstalling, it be extremely careful so that both the white and green portions of the Circuit Board on the Upper Cylinder Unit will correctly match the white and green portions of the Circuit Board on Bottom Cylinder as shown in Fig. 16.

Note:

It the Upper Cylinder unit is reversely installed, no colour will appear when playing back a pre-recorded tape.

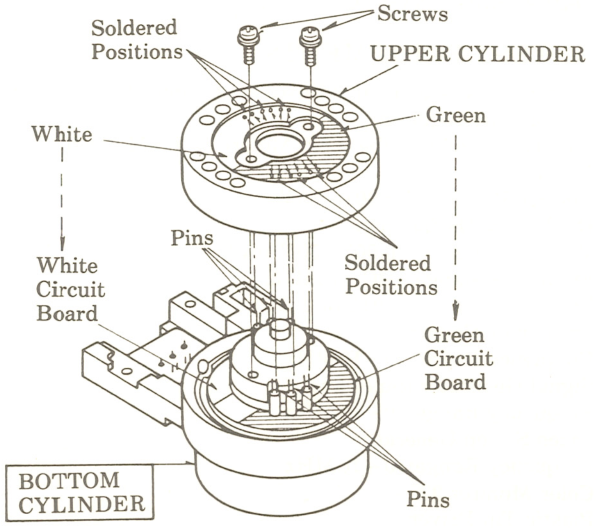

Soldered Positions
Screws
UPPER CYLINDER
Green
White
Pins
White Circuit Board
Soldered Positions
Green Circuit Board
BOTTOM CYLINDER
Pins

Fig. 16

2-4. REPLACEMENT OF AC CORD

Note:

When AC cord is replaced, plase change Contraction tube without fial for safety operation.

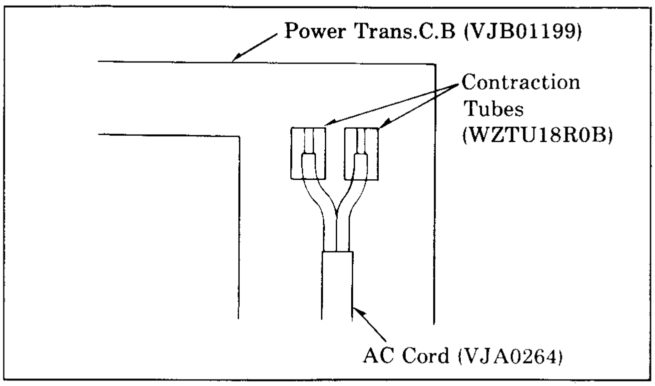

Power Trans.C.B (VJB01199)
Contraction Tubes (WZTU18R0B)
AC Cord (VJA0264)

Fig. 17

1. Strip the wire from AC cord as shown below.

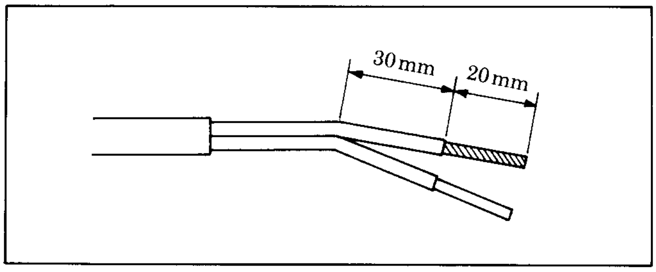


Fig. 18

2. Solder the wire of AC cord to the Power Trans. C.B. as shown in Fig. 17 with inserting contraction tubes.
3. Contract the contraction tubes by heating up with Solde Iron.

2-5. ELECTRICAL ADJUSTMENT PROCEDURES

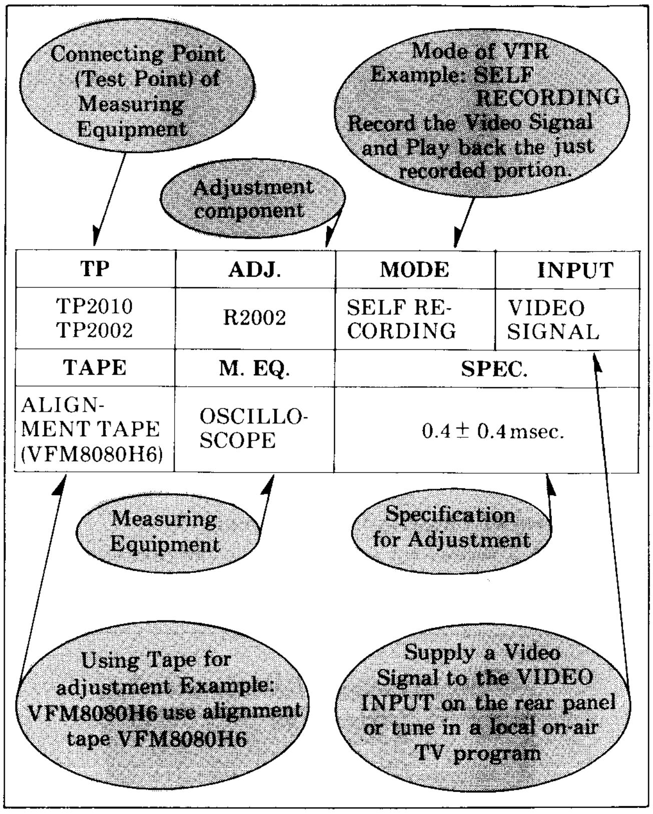
This section provides complete electrical adjustment procedures which may be required for electronic circuits of VHS Video Cassette recorders NV-870.

2-5-1. TEST EQUIPMENTS

To perform the electrical adjustments completely, following equipments are required.

1. VTVM (Vacuum Tube Volt Meter) or DVM (Digital Volt Meter)
   Voltage Range: 0.001 ~ 50V
2. Dual-Trace Oscilloscope
   Voltage Range: 0.005 ~ 50V/div.
   Frequency Range: DC ~ 10MHz
   Probes: 10:1 or 1:1
3. Frequency Counter
   Frequency Range: 0 ~ 10MHz
4. Signal Generator (Sinewave)
   Frequency Range: 0 ~ 10MHz
5. Video Sweep Generator
   Frequency Range: 0 ~ 10MHz
6. Color Monitor TV
7. Plastic Tip Driver
8. VHS Alignment Tape (VFM8080H6)

2-5-2. HOW TO READ THE ADJUSTMENT PROCEDURES


Connecting Point (Test Point) of Measuring Equipment
Adjustment component
Mode of VTR Example: SELF RECORDING Record the Video Signal and Play back the just recorded portion.
Measuring Equipment
Specification for Adjustment
Using Tape for adjustment Example: VFM8080H6 use alignment tape VFM8080H6
Supply a Video Signal to the VIDEO INPUT on the rear panel or tune in a local on-air TV program

TP	ADJ.	MODE	INPUT
TP2010 TP2002	R2002	SELF RECORDING	VIDEO SIGNAL
TAPE	**M. EQ.**	**SPEC.**	
ALIGNMENT TAPE (VFM8080H6)	OSCILLOSCOPE	0.4 ± 0.4msec.	

Fig. 19

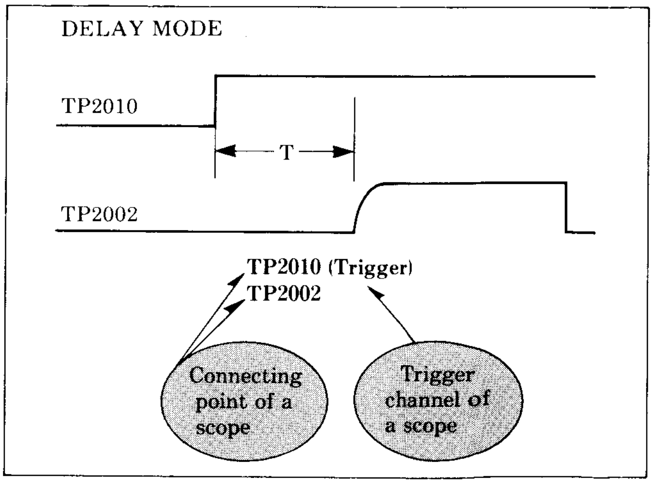

DELAY MODE
TP2010
T
TP2002
TP2010 (Trigger)
TP2002
Connecting point of a scope
Trigger channel of a scope

Fig. 20

POWER SUPPLY SECTION

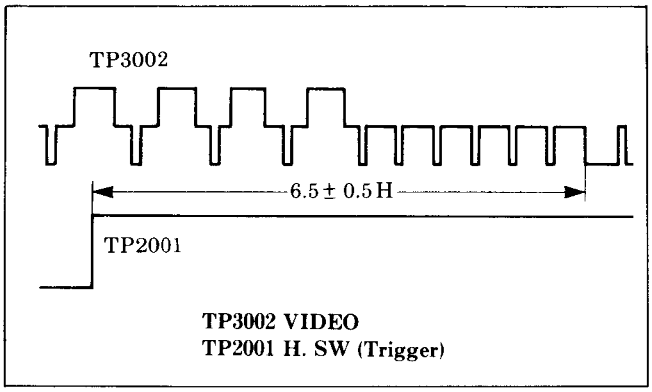
2-5-3. REG +5V ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP1003	VR1003	STOP	
TAPE	**M. EQ.**	**SPEC.**	
	D.V.M	5.1 ± 0.05V	

SERVO SECTION

2-5-4. PG SHIFTER ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP2001 TP3002	VR2001	PLAY	
TAPE	**M. EQ.**	**SPEC.**	
ALIGN-MENT TAPE (VFM8080H6)	OSCILLO-SCOPE	6.5 ± 0.5H	



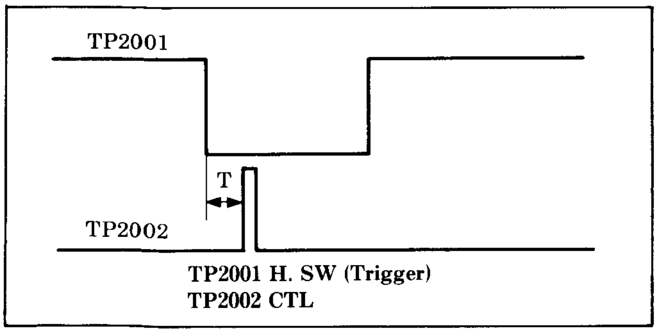
TP3002 VIDEO
TP2001 H. SW (Trigger)

Fig. 21

2-5-5. TRACKING FIX ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP2001 TP2002	VR2002	SELF RE-CORDING	VIDEO SIGNAL
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	OSCILLO-SCOPE	T=7.3 ± 0.4 msec.	

1. TRACKING VR is center fix position.
2. Play back the just recorded portion.
3. Adjust VR2002 so that the period of "T" is 7.3 ± 0.4 msec. as shown below.

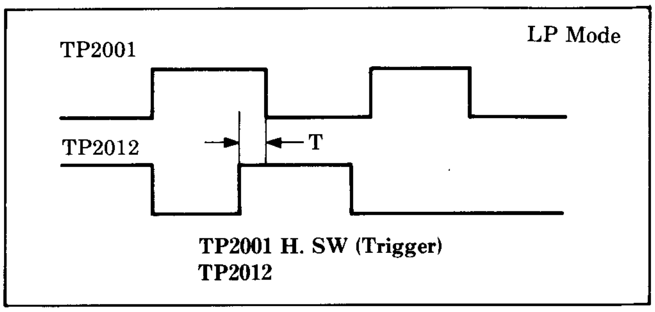


TP2001 H. SW (Trigger)
TP2002 CTL

Fig. 22

2-5-6. X-VALUE ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP2001 TP2012	VR2201	LP REC	
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	OSCILLO-SCOPE	T=5.0 ± 0.5 msec.	

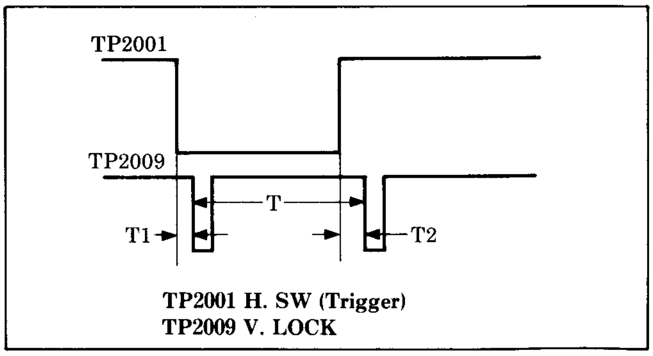


TP2001 H. SW (Trigger)
TP2012

Fig. 23

2-5-7. ARTIFICIAL V-SYNC ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP2001 TP2009	SP: VR2010 SLP: VR2009	SELF RE-CORDING	
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	OSCILLO-SCOPE	SP: $T = T2 - T1 = +110\mu$sec. SLP: $T = T2 - T1 = -110\mu$sec.	



TP2001 H. SW (Trigger)
TP2009 V. LOCK

Fig. 24

2-5-8. FINE SLOW FREE RUN ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP2015	VR2013	REC • PLAY	VIDEO SIGNAL
TAPE	**M. EQ.**	**SPEC.**	
60 MIN. BLANK TAPE (NV-T60)	FREQUEN-CY COUNTER	760 ± 5 Hz	

Note:

To make this adjustment, please prepare a 1 : 1 probe and 60 min. Tape (NV-T60).

1. Connect a jumper wire between TP2018 and GND.
2. Connect a 470Ω resistor between TP2019 and TP1003.

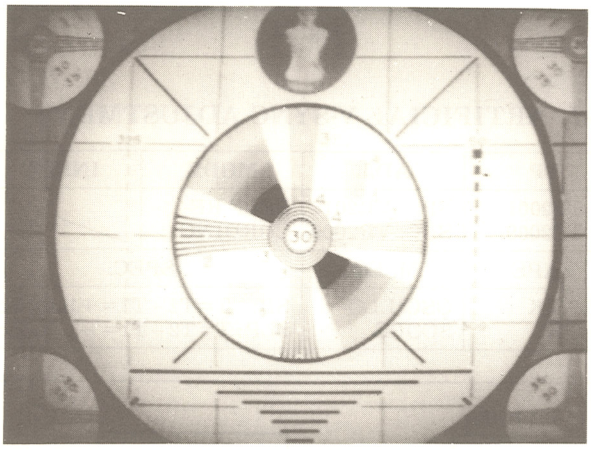
2-5-9. FINE SLOW TRACKING ADJUSTMENT

TP	ADJ.	MODE	INPUT
	SP: VR2011 LP: VR2202 SLP: VR2006	SELF RECORDING	VIDEO SIGNAL
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	MONITOR TV		

Note:

When this adjustment proceeds, PG shifter, Tracking Fix and Fine Slow Free Run Adjustments must be completed.

1. SLOW TRACKING VR is center position.
2. Play back the just recorded portion in Slow mode.
3. Adjust each variable resistors so that the noise band stays on the top or bottom of TV monitor screen.



SLOW MODE

Fig. 25

LUMINANCE, CHROMINANCE & HEAD AMP SECTION

2-5-10. CHROMINANCE RECORDING CURRENT ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP503 (HOT) TP504 (GND)	VR502	SLP REC • PLAY	VIDEO SIGNAL
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	OSCILLO-SCOPE	36 ± 5mVp-p	

Note:

Turn VR501 so that the Luminance Rec Current becomes minimum.

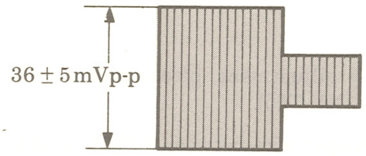
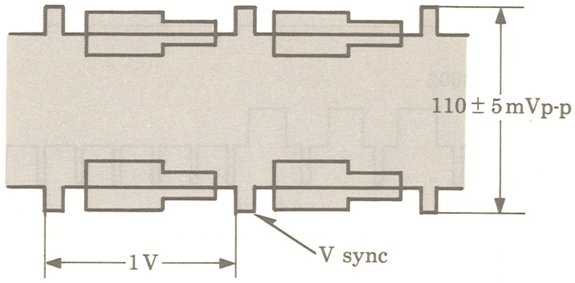


Fig. 26

2-5-11. LUMINANCE RECORDING CURRENT ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP503 (HOT) TP504 (GND)	VR501	SLP REC • PLAY	VIDEO SIGNAL
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	OSCILLO-SCOPE	110 ± 5mVp-p	



TP503 VIDEO

Fig. 27

AUDIO SECTION

2-5-12. AUDIO BIAS CURRENT ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP4002 (+) TP4003 (−)	VR4002	REC • PLAY	
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	V.T.V.M.	2.35 ± 0.1mVrms	

2-5-13. AUDIO PLAYBACK LEVEL ADJUSTMENT

TP	ADJ.	MODE	INPUT
LINE OUT	VR4001 (Normal) VR4504 (L-ch) VR4505 (R-ch)	SP SELF RECORDING	1kHz, −10dB AUDIO SIGNAL
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	V.T.V.M/ SIGNAL GENERATOR	−8.5 ± 2dB	

Note:

Before this adjustment "Tape Interchangeability Adjustment" must be completed.

1. Set the Audio Recording SW is AGC position.
2. Play back the just recorded portion.
3. Adjust VR4001 (NORMAL mode), VR4504 (STEREO mode) and VR4505 (STEREO mode) volumes one by one, so that the level of the playback becomes −8.5 ± 2dB.

2-5-14. AUDIO RECORDING CURRENT ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP4507 (HOT) TP4508 (GND)	VR4503	REC • PLAY	
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	OSCILLOSCOPE	260 ± 10mVp-p	

2-5-15. PLAYBACK AUDIO SW ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP4511 TP2001	VR4510	SELF RECORDING	10kHz, 0dB
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	SIGNAL GENERATOR, OSCILLOSCOPE		

1. Set the Input Select SW of the deck to AUDIO mode and Audio Recording SW is AGC position.
2. Connect the signal generator output to the both Input Jacks (L) and (R) .
3. Playback the just recorded portion.
4. Adjust the Playback Audio SW VR (VR4510) while listening to the stereo playback sound.
   (1) Confirm the T′ time when the abnormal sound just occurs during tuning clockwise on VR4510.
   (2) Confirm the T″ time when the abnormal sound just occurs during tuning counter clockwise on VR4510.
   (3) Adjust VR4510 so that the falling edge T of the SHIFT H. SW pulse becomes the center portion of the both T′ and T″.

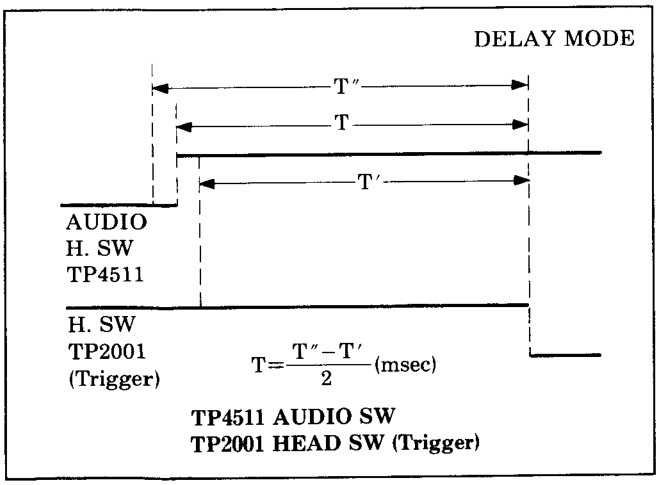

DELAY MODE
T″
T
T′
AUDIO
H. SW
TP4511
H. SW
TP2001
(Trigger)
T=(T″−T′)/2 (msec)
TP4511 AUDIO SW
TP2001 HEAD SW (Trigger)

Fig. 28

2-5-16. AUDIO MUTING ADJUSTMENT

TP	ADJ.	MODE	INPUT
	VR4505	SELF RECORDING	
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE			

1. Set the AUDIO SELECT sw to the STEREO position.
2. Play back the just recorded portion.
3. Preadjust VR4505 until the Hi-Fi indication on the front panel display turns the NORMAL indication.
4. Adjust the TRACKING VR so that the Audio Tracking level becomes maximum.
5. Then slowly adjust VR4505 where the L+R indication just turns ON.
6. Confirm that the abnormal sound does not contain in the play back Hi-Fi sound.

2-5-17. MPX OUTPUT LEVEL ADJUSTMENT

TP	ADJ.	MODE	INPUT
P4805-1	VR4801		AUDIO SIGNAL
TAPE	**M. EQ.**	**SPEC.**	
	SIGNAL GENERATOR/D.V.M.	165 ± 4mVrms	

Note:

To make this adjustment, please prepare the following circuit.

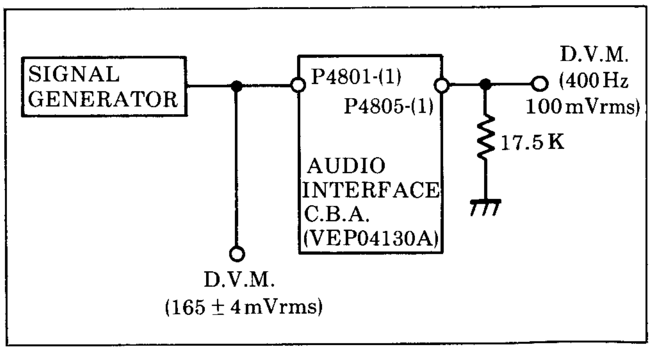

SIGNAL GENERATOR
P4801-(1)
P4805-(1)
AUDIO INTERFACE C.B.A. (VEP04130A)
D.V.M. (400Hz 100mVrms)
17.5K
D.V.M. (165 ± 4mVrms)

Fig. 29 Adjustment Circuit

1. Set the SIGNAL GENERATOR for 100mVrms 400Hz in connect P4801-(1).
2. Adjust VR4801 so that the level becomes 165 ± 4mVrms.

OPERATION SECTION

2-5-18. OPERATION CLOCK ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP6503	VR6506	STOP	
TAPE	**M. EQ.**	**SPEC.**	
	FREQUENCY COUNTER	1.55kHz ± 100Hz	

Note:

To make this adjustment, please prepare a 10:1 probe.

2-5-19. LEVEL METER SENSITIVITY ADJUSTMENT

TP	ADJ.	MODE	INPUT
	VR6507 (L-ch) VR6508 (R-ch)	STOP	1kHz, −10dB
TAPE	**M. EQ.**	**SPEC.**	
	SIGNAL GENERATOR/ V.T.V.M.		

1. Set the AUDIO SELECT sw to the STEREO position and AUDIO RECORDING SW is the MANUAL position.
2. Connect the signal generator output to the both Input Jacks (L) and (R) and adjust the RECORDING LEVEL volume so that the AUDIO OUT level becomes −8.5dB.
3. Adjust VR6507 so that the 0dB indication at the L-ch level meter just lights up.
4. Adjust VR6508 so that the 0dB indication at the R-ch level meter just lights up.

TIMER SECTION

2-5-20. TIMER RESET ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP7501	R7535		
TAPE	**M. EQ.**	**SPEC.**	
	DC POWER SUPPLY/ FREQUENCY COUNTER		

Note:

Do not connect the AC Power plug.

1. Connect the jumper wire between TP7504 and TP7505.
2. Set the voltage of the DC POWER SUPPLY for 4.5± 0.05V and supply to TP7505 (+) and TP7507 (GND).
3. Adjust R7535 for change the frequency from 128Hz to 16Hz.

2-5-21. TIMER CLOCK ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP7501	C7502		
TAPE	**M. EQ.**	**SPEC.**	
	FREQUENCY COUNTER/ DC POWER SUPPLY	7812.5 ± 0.017μsec	

Note:

Do not connect the AC Power plug.

1. Connect the jumper wire between TP7504 and TP7505.
2. Set the voltage of the DC POWER SUPPLY for 5.1 ± 0.05V and supply to TP7505 (+) and TP7507 (GND).
3. Adjust C7502 so that the indication of FREQUENCY COUNTER becomes 7812.5 ± 0.017μsec.

2-5-22. INFRARED TUNING FREQUENCY ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP7581	T7580		56.9 ± 0.05kHz 20μVrms AUDIO SIGNAL
TAPE	**M. EQ.**	**SPEC.**	
	OSCILLOSCOPE/ SIGNAL GENERATOR (SINE WAVE)		

Note:

To make this adjustment, please prepare the following circuit.

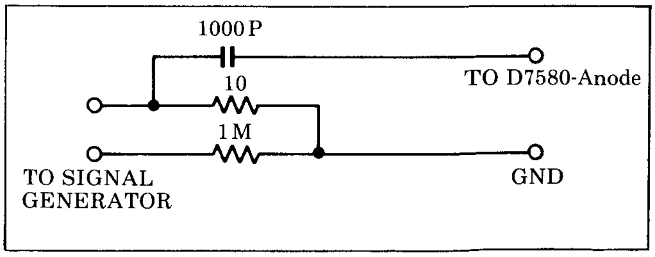


Fig. 30 Adjustment Circuit

1. Set the SIGNAL GENERATOR for 56.9 ±0.05kHz (20μVrms), then this signal is supplied to anode of D7580.
2. Connect the oscilloscope to TP7581.
3. Adjust T7580 so that the waveform becomes maximum.

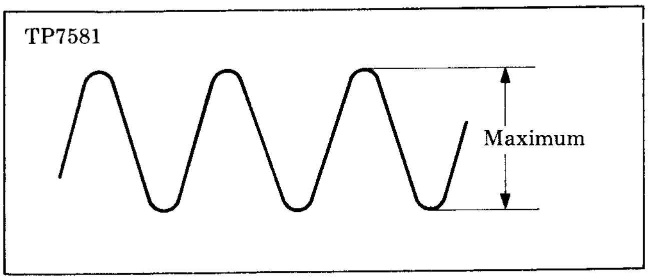


Fig. 31

2-5-23. TV SIGNAL DETECT FREQUENCY ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP7508	R7596		
TAPE	**M. EQ.**	**SPEC.**	
	FREQUENCY COUNTER	15.75 ± 0.05kHz	

Note:

To make this adjustment, please prepare the following circuit.

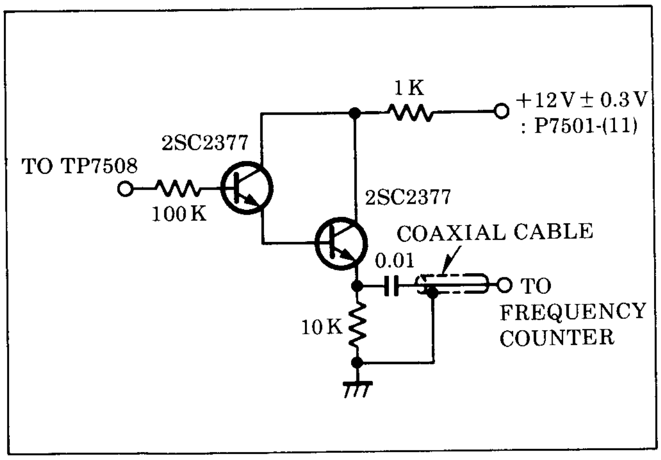

1K
+12V ± 0.3V
: P7501-(11)
2SC2377
TO TP7508
100K
2SC2377
COAXIAL CABLE
0.01
TO
FREQUENCY
COUNTER
10K

Fig. 32 Adjustment Circuit

TV DEMODULATOR SECTION

2-5-24. TEST EQUIPMENTS

To make adjustment completely, following equipments are required.

1. VIF SWEEP GENERATOR with the Trap Adjustor 45.75MHz
2. SIF SWEEP GENERATOR .... 4.5MHz ± 90kHz
3. CW OSCILLATOR .... 45.75MHz ± 100kHz
4. MONITOR SCOPE
5. OSCILLOSCOPE
6. DIGITAL VOLT METER
7. FREQUENCY COUNTER
8. TUNING AMP 45.75MHz
9. ADJUSTMENT JIG.

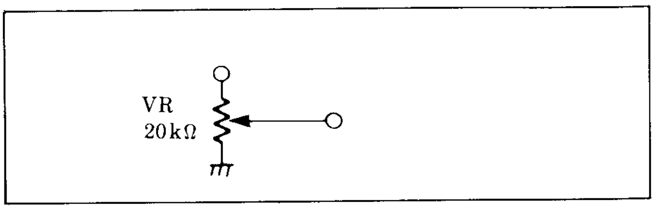


Fig. 33 Adjustment Jig

Note:

To adjust the TV Demodulator Section, TV Demodulator Unit must be removed from the Deck.

1. Remove the TV DEMODULATOR Unit from the deck, and unsolder the "A" point as shown below.

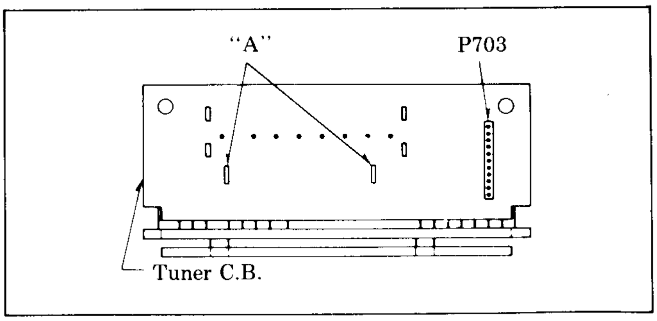

"A"
P703
Tuner C.B.

Fig. 34

2. Open the Tuner C.B. connect the P703, P701 and Tuner Pin Jack as shown below.

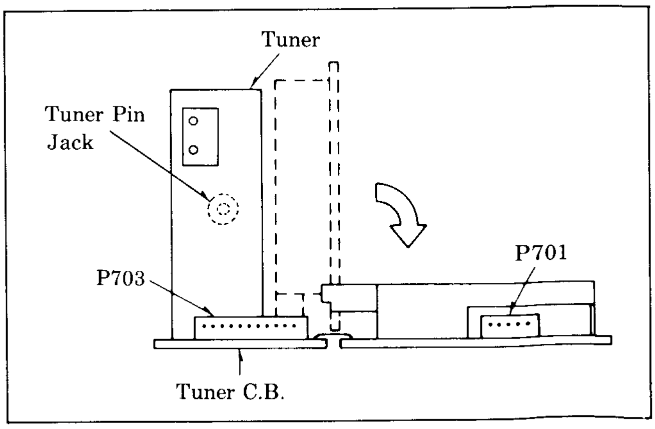

Tuner
Tuner Pin Jack
P703
P701
Tuner C.B.

Fig. 35

2-5-25. VIF OVER ALL SWEEP ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP707	T701, T703 TUNER CONVERTER COIL		VIF SWEEP
TAPE	**M. EQ.**	**SPEC.**	
	VIF SWEEP/ MONITOR SCOPE		

1. Set the BAND SW to the VHF high position (VH) and turn the tuning volume so that the voltage at BT terminal of the tuner becomes 20 ± 1 V.
2. Set the AFC SW of the deck to OFF position.
3. Connect the VIF SWEEP to the TUNER TEST POINT and connect the MONITOR SCOPE to TP707 as shown below.

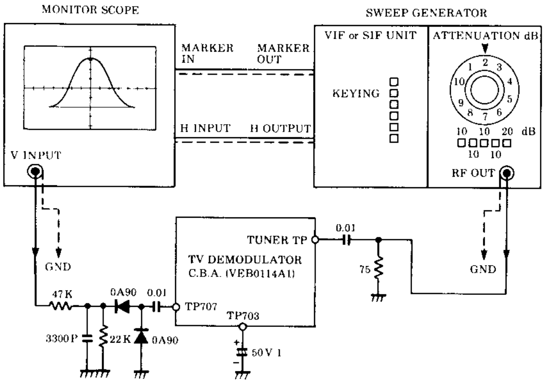

MONITOR SCOPE
SWEEP GENERATOR
MARKER IN
MARKER OUT
VIF or SIF UNIT
ATTENUATION dB
KEYING
H INPUT
H OUTPUT
10 10 20 dB
10 10
V INPUT
RF OUT
GND
TUNER TP
0.01
TV DEMODULATOR C.B.A. (VEB0114A1)
75
GND
47K
0A90
0.01
TP707
TP703
3300P
22K
0A90
50V 1

Fig. 36

4. Adjust the output of the VIF SWEEP GENERATOR so that the sweep wave becomes 0.3 Vp-p on the MONITOR SCOPE.
5. Release the attenuator of the VIF SWEEP GENERATOR for 20 dB and connect the Adjustment Jig. to both points TP709 and REG 12 V (P703-11).
6. Adjust the VR of the Adjustment Jig. so that the sweep wave becomes 0.3 Vp-p on the MONITOR SCOPE.
7. Adjust T701 so that the marker position at 44.00 MHz becomes maximum.
8. Adjust T703 so that the waveform as shown below.

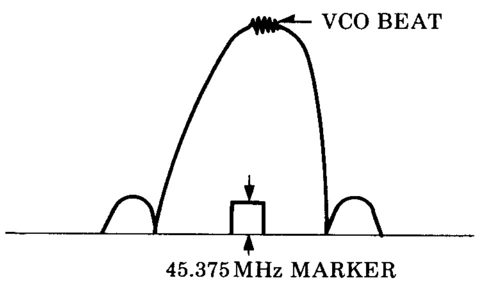

VCO BEAT
45.375MHz MARKER

Fig. 37

9. Adjust the VR of the Adjustment Jig. so that the sweep wave becomes 0.3 Vp-p on the MONITOR SCOPE.
10. Adjust the T703 so that the waveform as shown in Fig. 37.
11. Adjust the T701 & Tuner Converter Coil so that the sweep output waveform becomes as shown below.

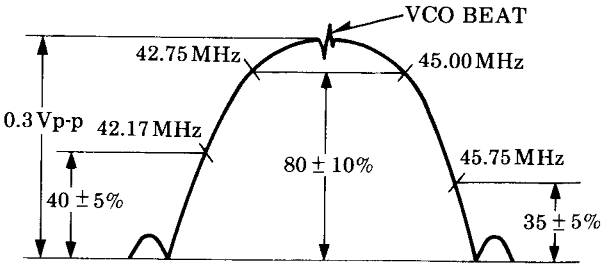

VCO BEAT
42.75MHz
45.00MHz
0.3Vp-p
42.17MHz
80 ± 10%
45.75MHz
40 ± 5%
35 ± 5%

Fig. 38

2-5-26. SIF SWEEP ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP710	T751 T752		VIF SWEEP
TAPE	**M. EQ.**	**SPEC.**	
	SIF SWEEP/ MONITOR SCOPE		

1. Set the BAND SW to the VHF high position (VH) and turn the tuning volume so that the voltage at BT terminal of the tuner becomes 20 ± 1 V.
2. Set the AFC SW of the deck to the OFF position.
3. Connect the SIF SWEEP GENERATOR to TP706 and connect the MONITOR SCOPE to VR751 (HOT) as shown below.

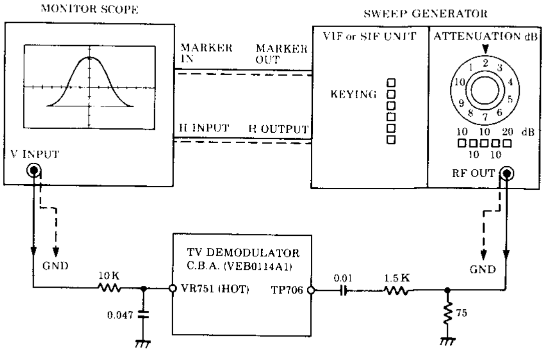

MONITOR SCOPE
SWEEP GENERATOR
MARKER IN
MARKER OUT
VIF or SIF UNIT
ATTENUATION dB
KEYING
H INPUT
H OUTPUT
10 10 20 dB
10 10
V INPUT
RF OUT
GND
TV DEMODULATOR C.B.A. (VEB0114A1)
10K
VR751 (HOT)
TP706
0.01
1.5K
GND
0.047
75

Fig. 39

4. Connect the Adjustment JIG. to both points TP709 and REG 12V (P703-11) and then adjust VR so that the DC level becomes 4V.
5. Set the output of the SIF SWEEP GENERATOR to 94 mVrms at no load.
6. Adjust T752 so that the marker position at 4.5 MHz becomes minimum as shown in Fig. 40.
7. Adjust T751 for maximum level and adjust the SIF "S" corve becomes as shown in Fig. 40.

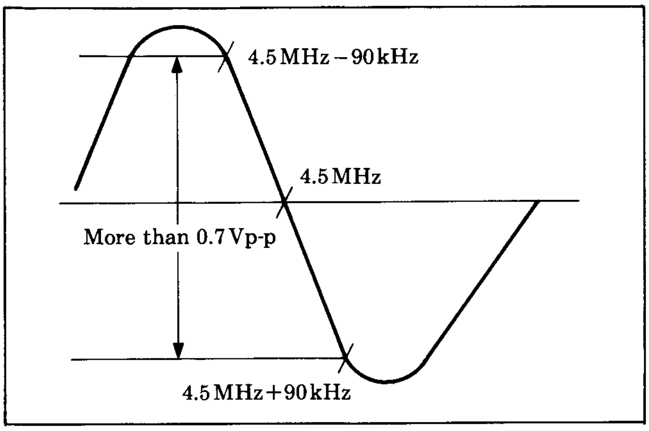


Fig. 40 SIF WAVEFORM

2-5-27. VCO ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP704	T703		
TAPE	**M. EQ.**	**SPEC.**	
	FREQUENCY COUNTER/ TUNING AMP	45750 ± 10kHz	

1. Set the BAND SW to the VHF high position (VH) and turn the tuning volume so that the voltage at BT terminal of the tuner becomes 15 ± 1V.
2. Set the AFC SW of the deck to OFF position.
3. Connect the Frequency Counter through a Tuning Amp to TP704 as shown below.

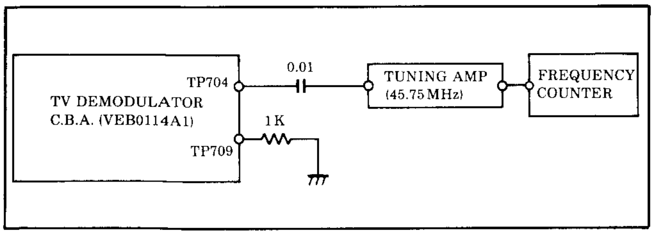


Fig. 41

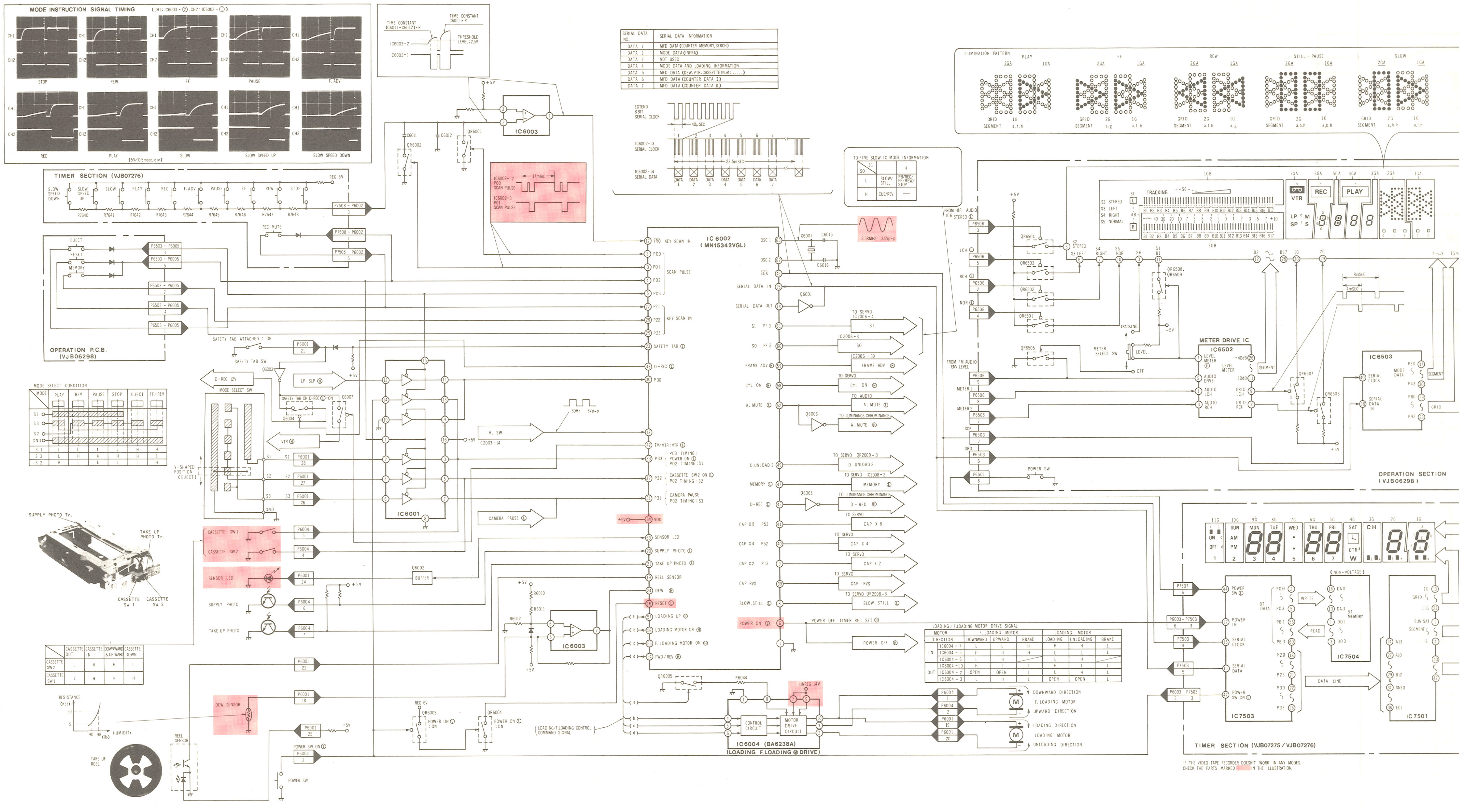
2-5-28. AFC ADJUSTMENT

TP	ADJ.	MODE	INPUT
AFC TERMINAL OF THE TUNER	T704		CW SIGNAL (45.75MHz)
TAPE	**M. EQ.**	**SPEC.**	
	CW OSCILLATOR/ D.V.M.	6.5 ± 0.3V	

1. Set the BAND SW to the VHF high position (VH) and turn the tuning volume so that the voltage at BT terminal of the tuner becomes 15 ± 1V.
2. Adjust the CW OSCILLATOR output to 1.0Vp-p and connect to the TUNER TEST POINT through a 10kΩ resistor.
3. Connect the D.V.M. to the TUNER TP of the tuner.
4. Confirm the voltage "A" of the D.V.M. when the AFC SW is off.
5. Set the AFC SW to on and adjust T704 for A ± 0.3V.
6. Change the frequency of the CW OSCILLATOR ± 100kHz centered at 45.75MHz and confirm that the difference of the AFC voltage is more than ± 2V.

Memo

3-1. SYSTEM CONTROL BLOCK DIAGRAM


MODE INSTRUCTION SIGNAL TIMING (CH1: IC6003 - ②, CH2: IC6003 - ①)
STOP
REW
FF
PAUSE
F. ADV
REC
PLAY
SLOW
SLOW SPEED UP
SLOW SPEED DOWN
(5V/0.5msec. div)
TIME CONSTANT (C6011+C6012)×R
TIME CONSTANT C6011×R
THRESHOLD LEVEL: 2.5V
IC6003-2
IC6003-1
IC6003
C6011
QR6002
C6012
QR6001
IC6002-2 P00 SCAN PULSE
IC6002-3 P01 SCAN PULSE
17msec
TIMER SECTION (VJB07276)
SLOW SPEED DOWN
SLOW SPEED UP
SLOW
PLAY
REC
F. ADV
PAUSE
FF
REW
STOP
REG 5V
R7640
R7641
R7642
R7643
R7644
R7645
R7646
R7647
R7648
P7508 - P6002
REC MUTE
EJECT
RESET
MEMORY
P6503 - P6005
OPERATION P.C.B. (VJB06298)
SAFETY TAB ATTACHED : ON
SAFETY TAB SW
P6001
Q6003
D-REC 12V
LP-SLP Ⓗ
MODE SELECT SW
SAFETY TAB ON D-REC Ⓛ : ON
Q6004
Q6007
VTR Ⓗ
V-SHAPED POSITION (EJECT)
S1
S2
S3
GND
IC6001
H. SW
IC2003-14
30Hz 5Vp-p
CAMERA PAUSE Ⓛ
SUPPLY PHOTO Tr.
TAKE UP PHOTO Tr.
CASSETTE SW 1
CASSETTE SW 2
SENSOR LED
SUPPLY PHOTO
TAKE UP PHOTO
Q6002 BUFFER
R6010
R6011
R6012
IC6003
DEW SENSOR
RESISTANCE (KΩ)
50
5
90
98
(%)
HUMIDITY
REEL SENSOR
TAKE UP REEL
P6003
POWER SW ON Ⓛ
POWER SW
REG 6V
QR6003
POWER ON Ⓛ : ON
QR6004
LOADING/F.LOADING CONTROL COMMAND SIGNAL
IC 6002 (MN15342VGL)
IRQ KEY SCAN IN
P00
P01
P02
P03
SCAN PULSE
P21
P22
P23
KEY SCAN IN
SAFETY TAB Ⓛ
D-REC Ⓛ
P 30
TV/VTR : VTR Ⓛ
P33 P03 TIMING : POWER ON Ⓛ P02 TIMING : S1
P32 CASSETTE SW2 ON Ⓛ P02 TIMING : S2
P31 CAMERA PAUSE P02 TIMING : S3
+5V
VDD
SENSOR LED
SUPPLY PHOTO Ⓛ
TAKE UP PHOTO Ⓛ
REEL SENSOR
DEW Ⓗ
RESET Ⓛ
LOADING UP Ⓗ
LOADING MOTOR ON Ⓗ
F. LOADING MOTOR ON Ⓗ
FWD/REV Ⓗ
OSC 1
OSC 2
X6001
C6015
C6016
3.58MHz 3.5Vp-p
SCK
SERIAL DATA IN
SERIAL DATA OUT
Q6001
S1 PF 3
S0 PF 2
FRAME ADV Ⓗ
CYL ON Ⓗ
A. MUTE Ⓛ
Q6006
D.UNLOAD 2
MEMORY Ⓛ
D-REC Ⓛ
Q6005
CAP X8 P53
CAP X4 P52
CAP X2 P13
CAP RVS
SLOW, STILL Ⓛ
POWER ON Ⓛ
TO SERVO IC2006-4
IC2006-3
IC2006-39
TO SERVO
TO AUDIO
TO LUMINANCE, CHROMINANCE
A. MUTE Ⓗ
TO SERVO QR2009-B
D. UNLOAD 2
TO SERVO IC2008-2
D-REC Ⓗ
CAP X 8
CAP X 4
CAP X 2
CAP RVS
TO SERVO QR2008-B
POWER OFF TIMER REC SET Ⓗ
POWER OFF Ⓗ
QR6005
R6044
UNREG 14V
CONTROL CIRCUIT
MOTOR DRIVE CIRCUIT
IC6004 (BA6238A) (LOADING, F.LOADING Ⓜ DRIVE)
P6004
DOWNWARD DIRECTION
F. LOADING MOTOR
UPWARD DIRECTION
LOADING DIRECTION
LOADING MOTOR
UNLOADING DIRECTION
EXTEND 8 BIT SERIAL CLOCK
40μSEC
IC6002-13 SERIAL CLOCK
23.5mSEC
IC6002-14 SERIAL DATA
DATA 1
DATA 2
DATA 3
DATA 4
DATA 5
DATA 6
DATA 7
TO FINE SLOW IC MODE INFORMATION
S1
S0
L
H
SLOW/STILL
P.B/REC/FF/REW/STOP
CUE/REV
ILUMINATION PATTERN
PLAY
FF
REW
STILL / PAUSE
SLOW
2GA
1GA
GRID
SEGMENT
2G
1G
FROM HIFI AUDIO IC6 STEREO Ⓛ
P6506
LCH
RCH
NOR
QR6504
QR6503
QR6502
QR6501
QR6505
+5V
S2 STEREO
S3 LEFT
S4 RIGHT
S5 NORMAL
S6
TRACKING
1GB
2GB
VTR
REC
PLAY
LP
SP
METER SELECT SW
LEVEL
OFF
QR6508, QR6509
FROM FM AUDIO ENV. LEVEL
METER 1
METER 2
SCK
SBD
P6503
P6501
POWER SW
METER DRIVE IC
IC6502
LEVEL METER
AUDIO ENVE.
AUDIO LCH
AUDIO RCH
GRID LCH
GRID RCH
-40dB
10dB
SEGMENT
QR6507
QR6506
8mSEC
4mSEC
IC6503
SERIAL CLOCK
SERIAL DATA IN
MODE DATA
OPERATION SECTION (VJB06298)
SUN
MON
TUE
WED
THU
FRI
SAT
CH
ON
OFF
AM
PM
OTR
W
P7507
P6003 - P7503
P7503
POWER SW Ⓛ
POWER IN
SERIAL CLOCK
SERIAL DATA
POWER SW ON Ⓛ
BT DATA
WRITE
READ
(NON-VOLTAGE)
BT MEMORY
IC7504
IC7503
DATA LINE
IC7501
GRID
SUN SAT
SEGMENT
TIMER SECTION (VJB07275/VJB07276)

SERIAL DATA

SERIAL DATA NO.	SERIAL DATA INFORMATION
DATA 1	MFD DATA (COUNTER MEMORY, SERCH)
DATA 2	MODE DATA (INFRA)
DATA 3	NOT USED
DATA 4	MODE DATA AND LOADING INFORMATION
DATA 5	MFD DATA (DEW. VTR. CASSETTE IN. etc .....)
DATA 6	MFD DATA (COUNTER DATA I)
DATA 7	MFD DATA (COUNTER DATA II)

MODE SELECT CONDITION

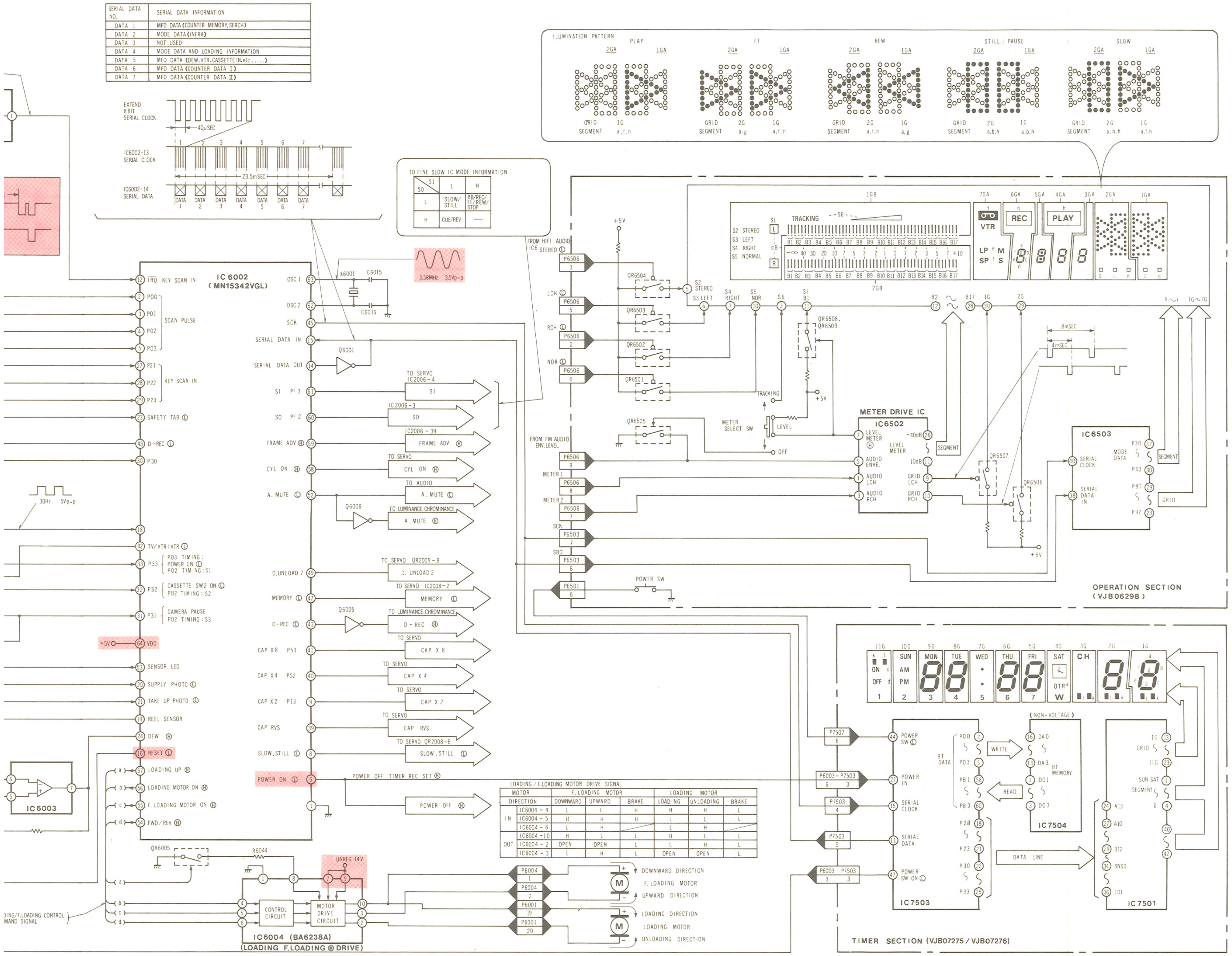
MODE	PLAY	REV	PAUSE	STOP	EJECT	FF/REV
S 1	L	L	L	L	H	H
S 3	L	H	H	H	H	L
S 2	H	L	L	L	L	H

	CASSETTE OUT	CASSETTE IN	DOWNWARD & UP WARD	CASSETTE DOWN
CASSETTE SW 2	L	H	H	L
CASSETTE SW 1	L	H	H	H

LOADING / F.LOADING MOTOR DRIVE SIGNAL

MOTOR		F. LOADING MOTOR			LOADING MOTOR		
DIRECTION		DOWNWARD	UPWARD	BRAKE	LOADING	UNLOADING	BRAKE
IN	IC6004 - 4	L	L	H	H	H	L
	IC6004 - 5	H	H	H	L	L	L
	IC6004 - 6	L	H		L	H	
OUT	IC6004 - 10	H	L	L	H	L	L
	IC6004 - 2	OPEN	OPEN	L	L	H	L
	IC6004 - 3	L	H	L	OPEN	OPEN	L

IF THE VIDEO TAPE RECORDER DOESN'T WORK IN ANY MODES.
CHECK THE PARTS MARKED ▨ IN THE ILLUSTRATION.


IC 6002
(MN15342VGL)
IRQ KEY SCAN IN
SCAN PULSE
KEY SCAN IN
SAFETY TAB
D-REC
P30
TV/VTR:VTR
P03 TIMING: POWER ON / P02 TIMING: S1
CASSETTE SW2 ON / P02 TIMING: S2
CAMERA PAUSE / P02 TIMING: S3
VDD
SENSOR LED
SUPPLY PHOTO
TAKE UP PHOTO
REEL SENSOR
DEW
RESET
LOADING UP
LOADING MOTOR ON
F.LOADING MOTOR ON
FWD/REV
OSC 1
OSC 2
SCK
SERIAL DATA IN
SERIAL DATA OUT
S1 PF3
S0 PF2
FRAME ADV
CYL ON
A. MUTE
D.UNLOAD 2
MEMORY
D-REC
CAP X8 P53
CAP X4 P52
CAP X2 P13
CAP RVS
SLOW, STILL
POWER ON
POWER OFF TIMER REC SET
TO SERVO
FRAME ADV
CYL ON
A. MUTE
TO LUMINANCE, CHROMINANCE
D. UNLOAD 2
MEMORY
D-REC
CAP X8
CAP X4
CAP X2
CAP RVS
SLOW, STILL
POWER OFF
X6001
C6015
C6016
Q6001
Q6005
Q6006
3.58MHz 3.5Vp-p
EXTEND 8 BIT SERIAL CLOCK
40μSEC
IC6002-13 SERIAL CLOCK
23.5mSEC
IC6002-14 SERIAL DATA
DATA 1 DATA 2 DATA 3 DATA 4 DATA 5 DATA 6 DATA 7
30Hz 5Vp-p
+5V
IC6003
IC6004 (BA6238A)
(LOADING F.LOADING ⊗ DRIVE)
CONTROL CIRCUIT
MOTOR DRIVE CIRCUIT
QR6005
R6044
UNREG 14V
LOADING/F.LOADING CONTROL COMMAND SIGNAL
P6004
P6001
DOWNWARD DIRECTION
F. LOADING MOTOR
UPWARD DIRECTION
LOADING DIRECTION
LOADING MOTOR
UNLOADING DIRECTION
ILLUMINATION PATTERN
PLAY
FF
REW
STILL, PAUSE
SLOW
2GA
1GA
GRID
SEGMENT
FROM HIFI AUDIO IC6 STEREO
LCH
RCH
NOR
P6506
P6503
P6501
QR6501
QR6502
QR6503
QR6504
QR6505
QR6506
QR6507
QR6508, QR6509
S2 STEREO
S3 LEFT
S4 RIGHT
S5 NORMAL
TRACKING
VTR
REC
PLAY
LP
SP
FROM FM AUDIO ENV. LEVEL
METER 1
METER 2
SCK
SBD
POWER SW
METER SELECT SW
LEVEL
OFF
METER DRIVE IC
IC6502
LEVEL METER
AUDIO ENVE.
AUDIO LCH
AUDIO RCH
GRID LCH
GRID RCH
SEGMENT
IC6503
SERIAL CLOCK
SERIAL DATA IN
MODE DATA
8mSEC
4mSEC
OPERATION SECTION
(VJB06298)
SUN MON TUE WED THU FRI SAT
ON OFF
AM PM
OTR
CH
P7502
P6003 - P7503
P7503
POWER SW
POWER IN
SERIAL CLOCK
SERIAL DATA
POWER SW ON
BT DATA
WRITE
READ
DATA LINE
(NON-VOLTAGE)
BT MEMORY
IC7503
IC7504
IC7501
GRID
SEGMENT
TIMER SECTION (VJB07275 / VJB07276)

SERIAL DATA NO.	SERIAL DATA INFORMATION
DATA 1	MFD DATA (COUNTER MEMORY, SERCH)
DATA 2	MODE DATA (INFRA)
DATA 3	NOT USED
DATA 4	MODE DATA AND LOADING INFORMATION
DATA 5	MFD DATA (DEW. VTR. CASSETTE IN. etc .....)
DATA 6	MFD DATA (COUNTER DATA Ⅰ)
DATA 7	MFD DATA (COUNTER DATA Ⅱ)

TO FINE SLOW IC MODE INFORMATION

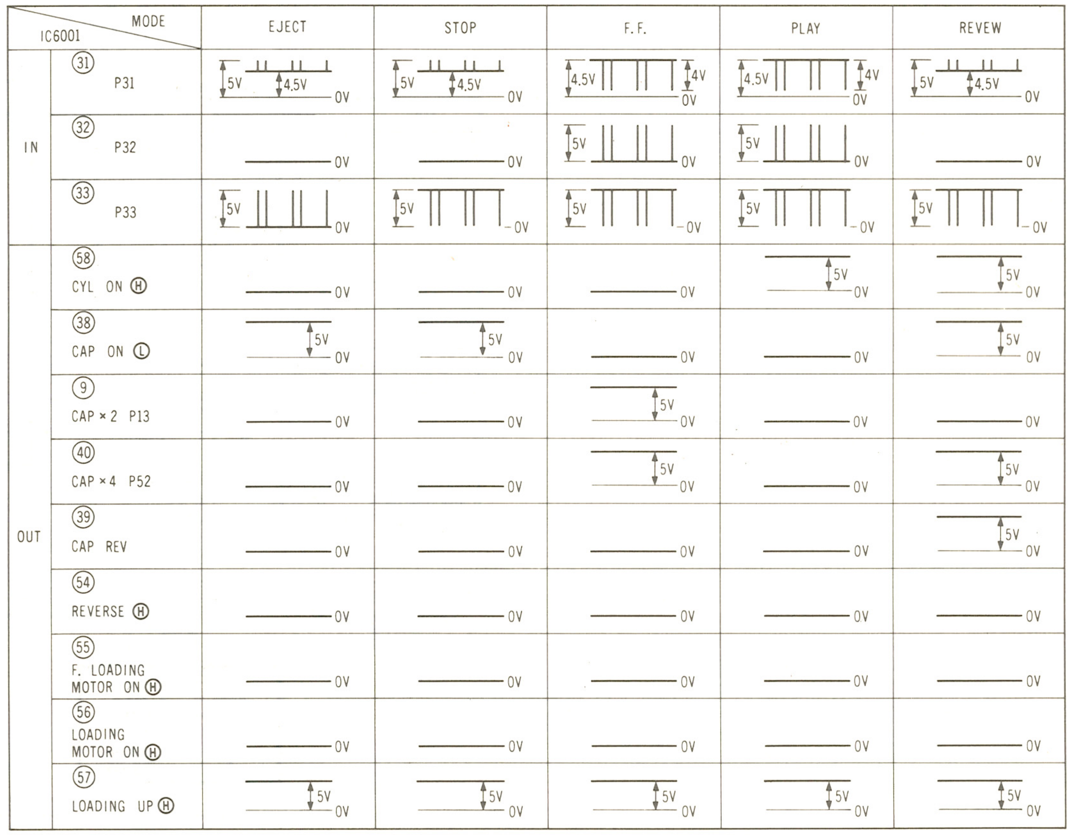
S0 \ S1	L	H
L	SLOW/STILL	P.B/REC/FF/REW/STOP
H	CUE/REV	—

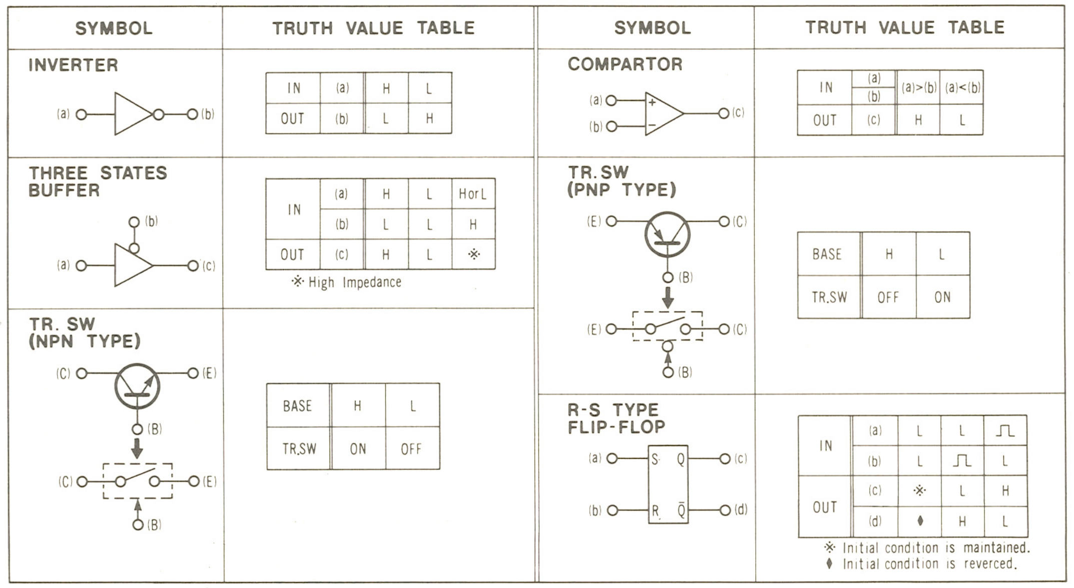
LOADING / F.LOADING MOTOR DRIVE SIGNAL

MOTOR		F. LOADING MOTOR			LOADING MOTOR		
DIRECTION		DOWNWARD	UPWARD	BRAKE	LOADING	UNLOADING	BRAKE
IN	IC6004 - 4	L	L	H	H	H	L
	IC6004 - 5	H	H	H	L	L	L
	IC6004 - 6	L	H		L	H	
OUT	IC6004 -10	H	L	L	H	L	L
	IC6004 - 2	OPEN	OPEN	L	L	H	L
	IC6004 - 3	L	H	L	OPEN	OPEN	L

IF THE VIDEO TAPE RECORDER DOESN'T WORK IN ANY MODES.
CHECK THE PARTS MARKED 🟥 IN THE ILLUSTRATION.

IC6001 INPUT OUTPUT PORT


IC6001
MODE
EJECT
STOP
F. F.
PLAY
REVEW
IN
㉛ P31
㉜ P32
㉝ P33
OUT
(58) CYL ON Ⓗ
㊳ CAP ON Ⓛ
⑨ CAP × 2 P13
㊵ CAP × 4 P52
㊴ CAP REV
(54) REVERSE Ⓗ
(55) F. LOADING MOTOR ON Ⓗ
(56) LOADING MOTOR ON Ⓗ
(57) LOADING UP Ⓗ
5V
4.5V
4V
0V


(a)
(b)
(c)
(d)
(E)
(C)
(B)
S
R
Q
Q̄

SYMBOL	TRUTH VALUE TABLE
INVERTER	
THREE STATES BUFFER	
TR. SW (NPN TYPE)	
COMPARTOR	
TR. SW (PNP TYPE)	
R-S TYPE FLIP-FLOP	

INVERTER

IN	(a)	H	L
OUT	(b)	L	H

THREE STATES BUFFER

IN	(a)	H	L	Hor L
	(b)	L	L	H
OUT	(c)	H	L	※

※ High Impedance

TR. SW (NPN TYPE)

BASE	H	L
TR.SW	ON	OFF

COMPARTOR

IN	(a) (b)	(a)>(b)	(a)<(b)
OUT	(c)	H	L

TR. SW (PNP TYPE)

BASE	H	L
TR.SW	OFF	ON

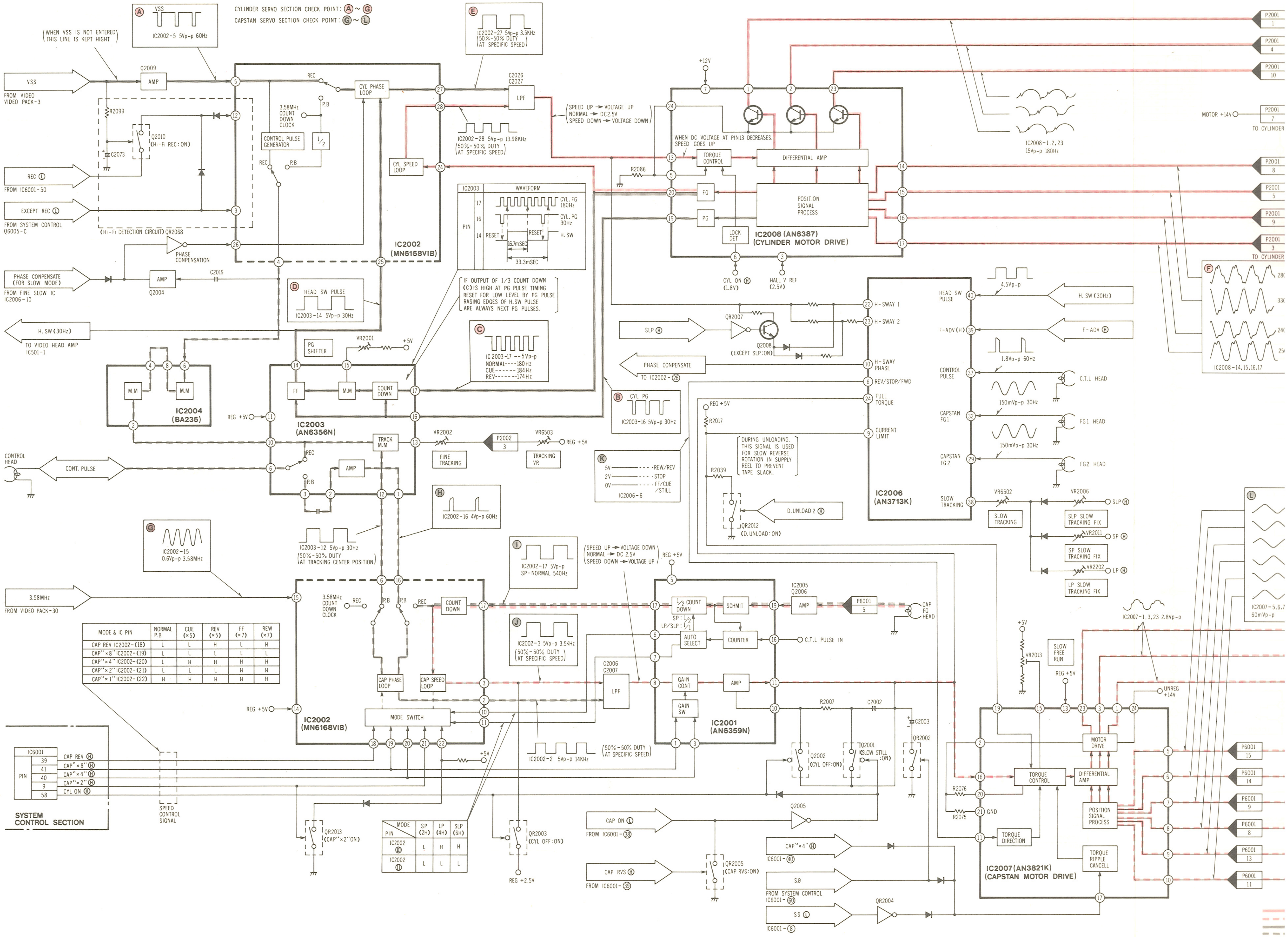
R-S TYPE FLIP-FLOP

IN	(a)	L	L	⎍
	(b)	L	⎍	L
OUT	(c)	※	L	H
	(d)	♦	H	L

※ Initial condition is maintained.
♦ Initial condition is reverced.

Next Page:
SERVO Section

3-2. SERVO BLOCK DIAGRAM


CYLINDER SERVO SECTION CHECK POINT: Ⓐ ~ Ⓖ
CAPSTAN SERVO SECTION CHECK POINT: Ⓖ ~ Ⓛ
(WHEN VSS IS NOT ENTERED THIS LINE IS KEPT HIGHT)
Ⓐ VSS IC2002-5 5Vp-p 60Hz
Ⓔ IC2002-27 5Vp-p 3.5KHz (50%-50% DUTY AT SPECIFIC SPEED)
VSS
FROM VIDEO VIDEO PACK-3
Q2009 AMP
R2099
Q2010 (Hi-Fi REC:ON)
C2073
REC Ⓛ FROM IC6001-50
EXCEPT REC Ⓛ FROM SYSTEM CONTROL Q6005-C
(Hi-Fi DETECTION CIRCUIT) QR2068
PHASE COMPENSATION
PHASE CONPENSATE (FOR SLOW MODE) FROM FINE SLOW IC IC2006-10
AMP Q2004
C2019
H. SW (30Hz) TO VIDEO HEAD AMP IC501-1
REC
CYL PHASE LOOP
3.58MHz COUNT DOWN CLOCK
P.B
CONTROL PULSE GENERATOR
1/2
REC
P.B
CYL SPEED LOOP
IC2002 (MN6168VIB)
C2026 C2027 LPF
IC2002-28 5Vp-p 13.98KHz (50%-50% DUTY AT SPECIFIC SPEED)
(SPEED UP → VOLTAGE UP NORMAL → DC2.5V SPEED DOWN → VOLTAGE DOWN)
IC2003 WAVEFORM
PIN 17 CYL. FG 180Hz
16 CYL. PG 30Hz
14 RESET RESET H. SW
16.7mSEC
33.3mSEC
Ⓓ HEAD SW PULSE IC2003-14 5Vp-p 30Hz
IF OUTPUT OF 1/3 COUNT DOWN (C) IS HIGH AT PG PULSE TIMING RESET FOR LOW LEVEL BY PG PULSE RASING EDGES OF H.SW PULSE ARE ALWAYS NEXT PG PULSES.
Ⓒ IC2003-17 5Vp-p NORMAL 180Hz CUE 184Hz REV 174Hz
M.M M.M
IC2004 (BA236)
PG SHIFTER
VR2001 +5V
FF M.M COUNT DOWN
IC2003 (AN6356N)
REG +5V
TRACK M.M
VR2002 FINE TRACKING
P2002 3
VR6503 REG +5V TRACKING VR
CONTROL HEAD
CONT. PULSE
REC P.B AMP
IC2003-12 5Vp-p 30Hz (50%-50% DUTY AT TRACKING CENTER POSITION)
Ⓗ IC2002-16 4Vp-p 60Hz
Ⓖ IC2002-15 0.6Vp-p 3.58MHz
3.58MHz FROM VIDEO PACK-30
3.58MHz COUNT DOWN CLOCK
COUNT DOWN
CAP PHASE LOOP
CAP SPEED LOOP
MODE SWITCH
IC2002 (MN6168VIB)
Ⓘ IC2002-17 5Vp-p SP-NORMAL 540Hz
Ⓙ IC2002-3 5Vp-p 3.5KHz (50%-50% DUTY AT SPECIFIC SPEED)
IC2002-2 5Vp-p 14KHz (50%-50% DUTY AT SPECIFIC SPEED)
(SPEED UP → VOLTAGE DOWN NORMAL → DC 2.5V SPEED DOWN → VOLTAGE UP)
C2006 C2007 LPF
REG +5V
1/2 COUNT DOWN
SP: 1/2 LP/SLP: 1/1
SCHMIT
AUTO SELECT
COUNTER
GAIN CONT
GAIN SW
AMP
IC2001 (AN6359N)
IC2005 Q2006 AMP
P6001 5
CAP FG HEAD
C.T.L PULSE IN
SYSTEM CONTROL SECTION
IC6001 PIN
CAP REV Ⓗ
CAP"×8" Ⓗ
CAP"×4" Ⓗ
CAP"×2" Ⓗ
CYL ON Ⓗ
SPEED CONTROL SIGNAL
QR2013 (CAP"×2"ON)
QR2003 (CYL OFF:ON)
REG +2.5V
+5V
+12V
WHEN DC VOLTAGE AT PIN13 DECREASES. SPEED GOES UP
TORQUE CONTROL
DIFFERENTIAL AMP
R2086
FG PG
POSITION SIGNAL PROCESS
LOCK DET
IC2008 (AN6387) (CYLINDER MOTOR DRIVE)
CYL ON Ⓗ (1.8V)
HALL V REF (2.5V)
IC2008-1,2,23 15Vp-p 180Hz
MOTOR +14V
P2001 1 4 10 7 8 5 9 3
TO CYLINDER
Ⓕ
IC2008-14,15,16,17
Ⓑ CYL PG IC2003-16 5Vp-p 30Hz
SLP Ⓗ
QR2007
Q2008 (EXCEPT SLP:ON)
PHASE CONPENSATE TO IC2002-26
H-SWAY 1
H-SWAY 2
H-SWAY PHASE
REV/STOP/FWD
FULL TORQUE
CURRENT LIMIT
IC2006 (AN3713K)
HEAD SW PULSE
F-ADV (H)
CONTROL PULSE
CAPSTAN FG1
CAPSTAN FG2
SLOW TRACKING
4.5Vp-p
H. SW (30Hz)
F-ADV Ⓗ
1.8Vp-p 60Hz
C.T.L HEAD
150mVp-p 30Hz
FG1 HEAD
150mVp-p 30Hz
FG2 HEAD
VR6502 SLOW TRACKING
VR2006 SLP Ⓗ SLP SLOW TRACKING FIX
VR2011 SP Ⓗ SP SLOW TRACKING FIX
VR2202 LP Ⓗ LP SLOW TRACKING FIX
REG +5V
R2017
(DURING UNLOADING. THIS SIGNAL IS USED FOR SLOW REVERSE ROTATION IN SUPPLY REEL TO PREVENT TAPE SLACK.
R2039
D.UNLOAD 2 Ⓗ
QR2012 (D.UNLOAD:ON)
Ⓚ 5V REW/REV 2V STOP 0V FF/CUE /STILL IC2006-6
R2007 C2002
C2003
Q2002 (CYL OFF:ON)
Q2001 (SLOW STILL :ON)
QR2002
CAP ON Ⓛ FROM IC6001-38
Q2005
CAP RVS Ⓗ FROM IC6001-39
QR2005 (CAP RVS:ON)
CAP"×4" Ⓗ IC6001-40
SØ FROM SYSTEM CONTROL IC6001-62
SS Ⓛ IC6001-8
QR2004
+5V VR2013
SLOW FREE RUN
REG +5V
IC2007-1,3,23 2.8Vp-p
UNREG +14V
R2076 R2075
GND
MOTOR DRIVE
TORQUE CONTROL
DIFFERENTIAL AMP
POSITION SIGNAL PROCESS
TORQUE DIRECTION
TORQUE RIPPLE CANCELL
IC2007 (AN3821K) (CAPSTAN MOTOR DRIVE)
P6001 15 14 9 8 13 11
Ⓛ
IC2007-5,6,7 60mVp-p

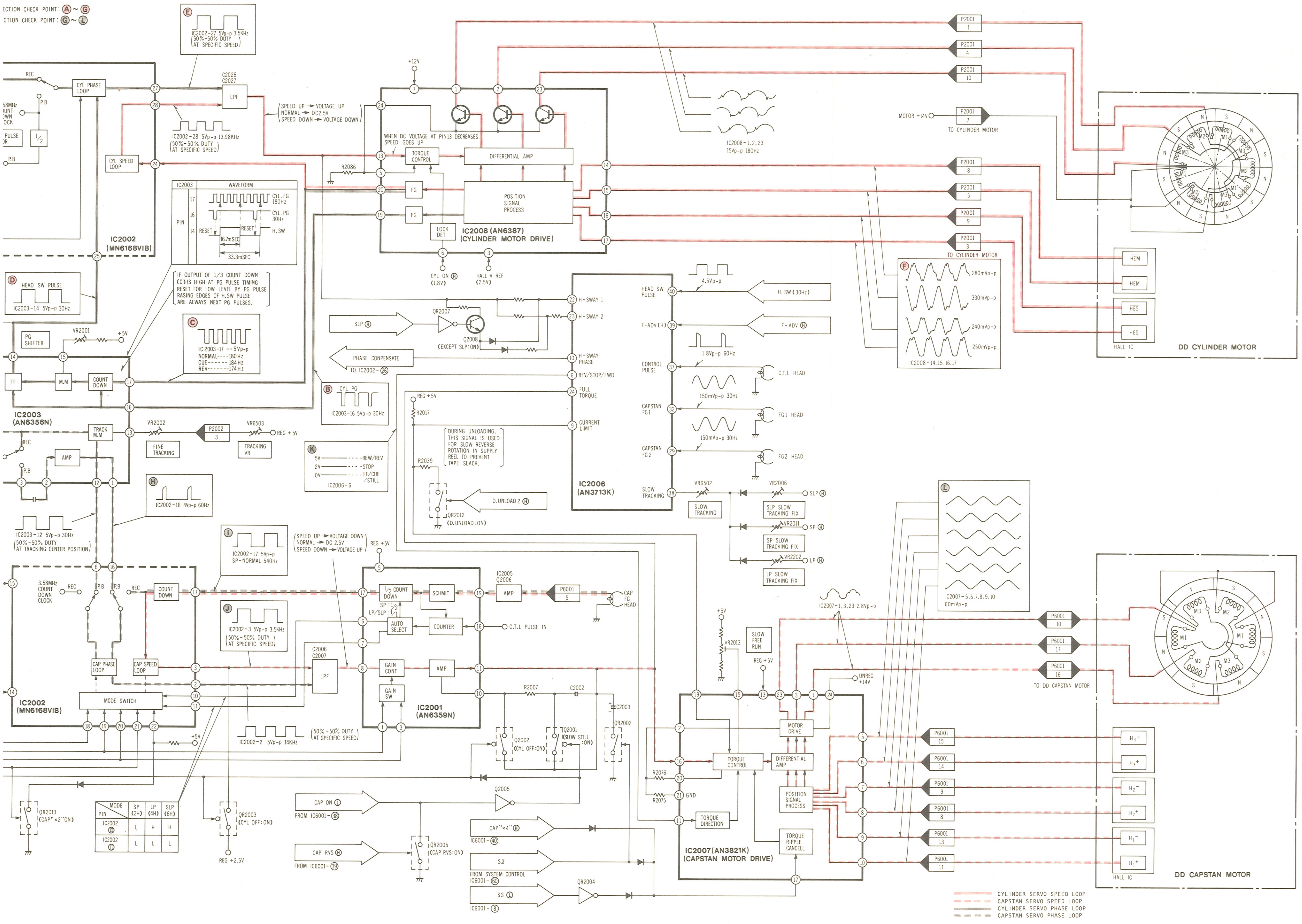
MODE & IC PIN	NORMAL P.B	CUE (×5)	REV (×5)	FF (×7)	REW (×7)
CAP REV IC2002-(18)	L	L	H	L	H
CAP"×8" IC2002-(19)	L	L	L	L	L
CAP"×4" IC2002-(20)	L	H	H	H	H
CAP"×2" IC2002-(21)	L	L	L	H	H
CAP"×1" IC2002-(22)	H	H	H	H	H

PIN \ MODE	SP (2H)	LP (4H)	SLP (6H)
IC2002 ⑩	L	H	H
IC2002 ⑪	L	L	L

IC6001 PIN	
39	CAP REV Ⓗ
41	CAP"×8" Ⓗ
40	CAP"×4" Ⓗ
9	CAP"×2" Ⓗ
58	CYL ON Ⓗ

M

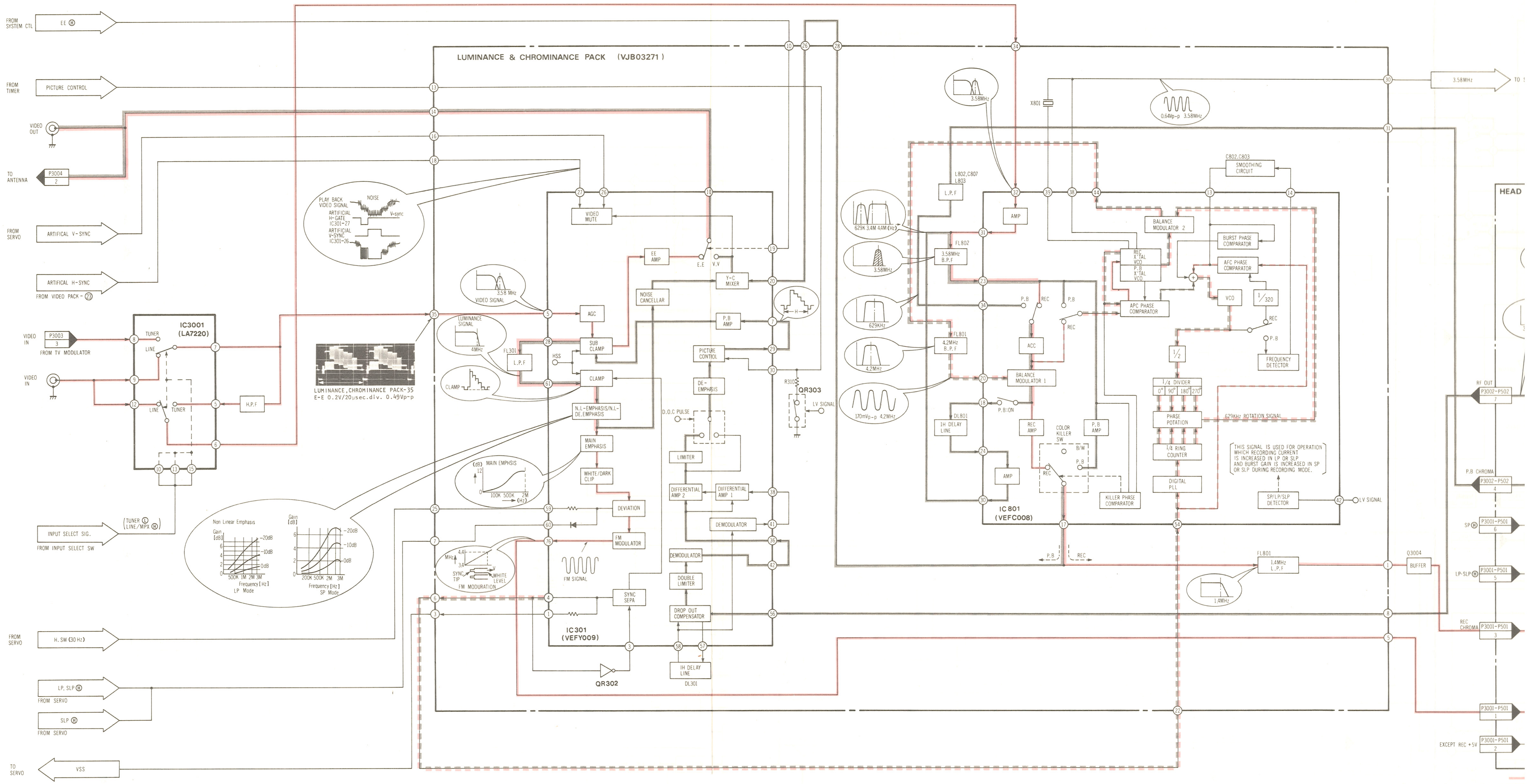
ECTION CHECK POINT : Ⓐ ~ Ⓖ
CTION CHECK POINT : Ⓖ ~ Ⓛ

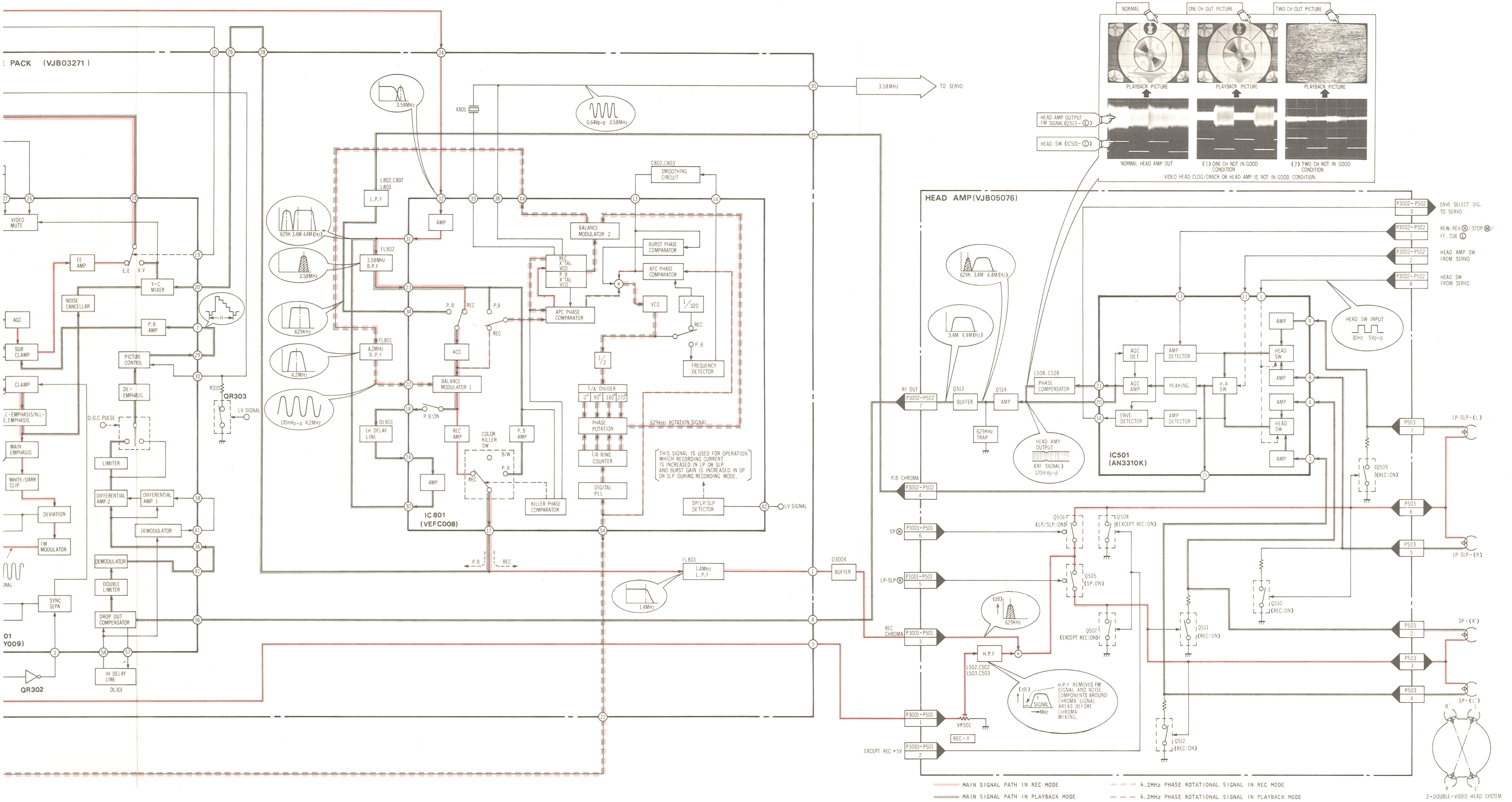


Ⓔ IC2002-27 5Vp-p 3.5KHz (50%-50% DUTY AT SPECIFIC SPEED)
REC
P.B
CYL PHASE LOOP
C2026 C2027
LPF
SPEED UP → VOLTAGE UP
NORMAL → DC2.5V
SPEED DOWN → VOLTAGE DOWN
IC2002-28 5Vp-p 13.98KHz (50%-50% DUTY AT SPECIFIC SPEED)
CYL SPEED LOOP
1/2
IC2002 (MN6168VIB)
IC2003
WAVEFORM
PIN
CYL. FG 180Hz
CYL. PG 30Hz
H. SW
RESET
16.7mSEC
33.3mSEC
Ⓓ HEAD SW PULSE
IC2003-14 5Vp-p 30Hz
IF OUTPUT OF 1/3 COUNT DOWN (C) IS HIGH AT PG PULSE TIMING RESET FOR LOW LEVEL BY PG PULSE RASING EDGES OF H.SW PULSE ARE ALWAYS NEXT PG PULSES.
Ⓒ IC2003-17 --5Vp-p
NORMAL----180Hz
CUE-------184Hz
REV-------174Hz
PG SHIFTER
VR2001
+5V
FF
M.M
COUNT DOWN
IC2003 (AN6356N)
TRACK M.M
VR2002
FINE TRACKING
P2002 3
VR6503
REG +5V
TRACKING VR
AMP
Ⓗ IC2002-16 4Vp-p 60Hz
IC2003-12 5Vp-p 30Hz (50%-50% DUTY AT TRACKING CENTER POSITION)
Ⓑ CYL PG
IC2003-16 5Vp-p 30Hz
+12V
WHEN DC VOLTAGE AT PIN13 DECREASES, SPEED GOES UP
TORQUE CONTROL
DIFFERENTIAL AMP
R2086
FG
PG
POSITION SIGNAL PROCESS
LOCK DET
IC2008 (AN6387) (CYLINDER MOTOR DRIVE)
CYL ON Ⓖ (1.8V)
HALL V REF (2.5V)
P2001 1
P2001 4
P2001 10
MOTOR +14V
P2001 7
TO CYLINDER MOTOR
IC2008-1,2,23 15Vp-p 180Hz
P2001 8
P2001 5
P2001 9
P2001 3
TO CYLINDER MOTOR
Ⓕ 280mVp-p
330mVp-p
240mVp-p
250mVp-p
IC2008-14,15,16,17
HEM
HEM
HES
HES
HALL IC
DD CYLINDER MOTOR
N
S
M1
M2
M3
SLP Ⓗ
QR2007
Q2008 (EXCEPT SLP:ON)
PHASE CONPENSATE
TO IC2002-㉖
H-SWAY 1
H-SWAY 2
H-SWAY PHASE
REV/STOP/FWD
FULL TORQUE
CURRENT LIMIT
REG +5V
R2017
DURING UNLOADING, THIS SIGNAL IS USED FOR SLOW REVERSE ROTATION IN SUPPLY REEL TO PREVENT TAPE SLACK.
R2039
D. UNLOAD 2 Ⓗ
QR2012 (D. UNLOAD:ON)
Ⓚ 5V -----REW/REV
2V -----STOP
0V -----FF/CUE /STILL
IC2006-6
IC2006 (AN3713K)
HEAD SW PULSE
4.5Vp-p
H. SW (30Hz)
F-ADV (H)
F-ADV Ⓗ
CONTROL PULSE
1.8Vp-p 60Hz
C.T.L HEAD
CAPSTAN FG1
150mVp-p 30Hz
FG1 HEAD
CAPSTAN FG2
150mVp-p 30Hz
FG2 HEAD
SLOW TRACKING
VR6502
SLOW TRACKING
VR2006
SLP Ⓗ
SLP SLOW TRACKING FIX
VR2011
SP Ⓗ
SP SLOW TRACKING FIX
VR2202
LP Ⓗ
LP SLOW TRACKING FIX
Ⓘ IC2002-17 5Vp-p SP-NORMAL 540Hz
SPEED UP → VOLTAGE DOWN
NORMAL → DC 2.5V
SPEED DOWN → VOLTAGE UP
REG +5V
3.58MHz COUNT DOWN CLOCK
REC
P.B
COUNT DOWN
Ⓙ IC2002-3 5Vp-p 3.5KHz (50%-50% DUTY AT SPECIFIC SPEED)
CAP PHASE LOOP
CAP SPEED LOOP
MODE SWITCH
IC2002 (MN6168VIB)
IC2002-2 5Vp-p 14KHz
(50%-50% DUTY AT SPECIFIC SPEED)
+5V
1/2 COUNT DOWN
SP : 1/2
LP/SLP : 1/1
SCHMIT
AUTO SELECT
COUNTER
C.T.L PULSE IN
C2006 C2007
LPF
GAIN CONT
GAIN SW
AMP
IC2001 (AN6359N)
IC2005 Q2006
AMP
P6001 5
CAP FG HEAD
R2007
C2002
C2003
QR2002
Q2002 (CYL OFF:ON)
Q2001 (SLOW STILL :ON)
QR2013 (CAP"×2"ON)
QR2003 (CYL OFF:ON)
REG +2.5V
CAP ON Ⓛ
FROM IC6001-㊳
Q2005
CAP RVS Ⓗ
FROM IC6001-㊴
QR2005 (CAP RVS:ON)
CAP"×4" Ⓗ
IC6001-㊵
SØ
FROM SYSTEM CONTROL
IC6001-㊿
SS Ⓛ
IC6001-⑧
QR2004
+5V
VR2013
SLOW FREE RUN
REG +5V
UNREG +14V
IC2007-1,3,23 2.8Vp-p
Ⓛ IC2007-5,6,7,8,9,10 60mVp-p
P6001 10
P6001 17
P6001 16
TO DD CAPSTAN MOTOR
MOTOR DRIVE
TORQUE CONTROL
DIFFERENTIAL AMP
POSITION SIGNAL PROCESS
R2076
R2075
GND
TORQUE DIRECTION
TORQUE RIPPLE CANCELL
IC2007 (AN3821K) (CAPSTAN MOTOR DRIVE)
P6001 15
P6001 14
P6001 9
P6001 8
P6001 13
P6001 11
H_3^-
H_3^+
H_2^-
H_2^+
H_1^-
H_1^+
HALL IC
DD CAPSTAN MOTOR
CYLINDER SERVO SPEED LOOP
CAPSTAN SERVO SPEED LOOP
CYLINDER SERVO PHASE LOOP
CAPSTAN SERVO PHASE LOOP

MODE PIN	SP (2H)	LP (4H)	SLP (6H)
IC2002 ⑩	L	H	H
IC2002 ⑪	L	L	L

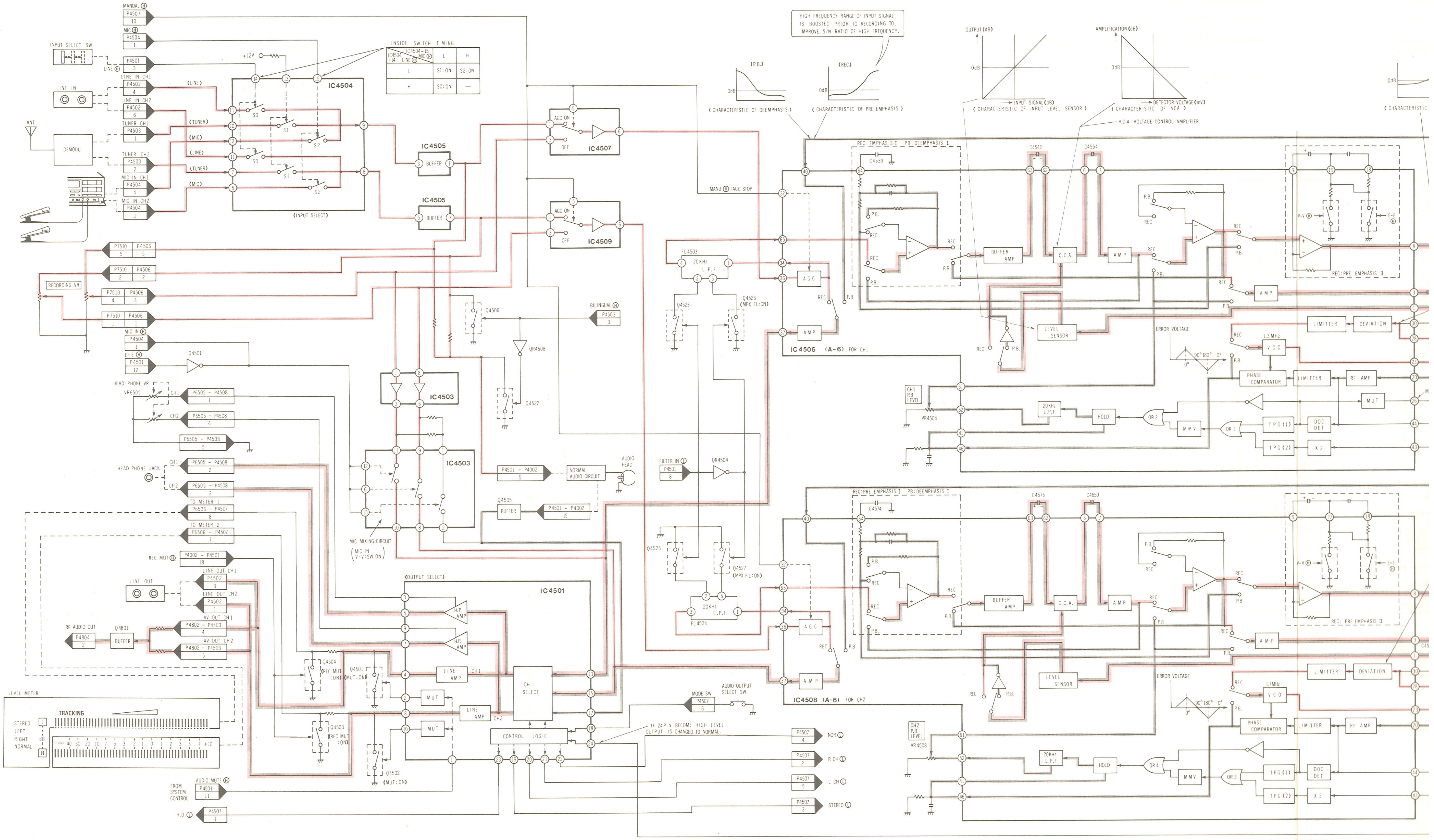
3-3. LUMINANCE & CHROMINANCE BLOCK DIAGRAM

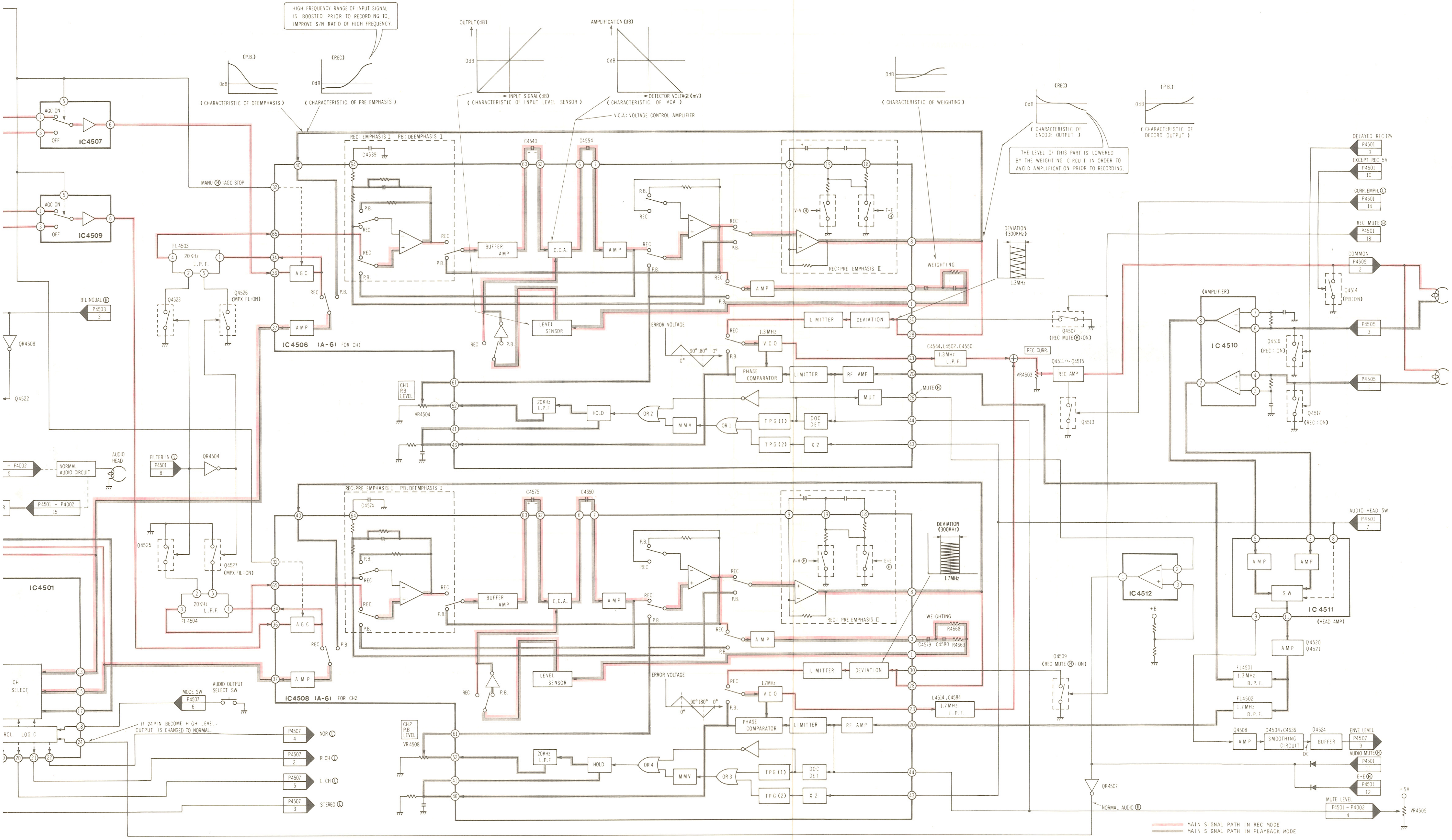

FROM SYSTEM CTL
EE Ⓗ
FROM TIMER
PICTURE CONTROL
VIDEO OUT
TO ANTENNA
P3004
FROM SERVO
ARTIFICIAL V-SYNC
ARTIFICIAL H-SYNC
FROM VIDEO PACK-㉓
VIDEO IN
P3003
FROM TV MODULATOR
IC3001 (LA7220)
TUNER
LINE
H.P.F
INPUT SELECT SIG.
FROM INPUT SELECT SW
TUNER Ⓛ LINE/MPX Ⓗ
FROM SERVO
H. SW (30 Hz)
LP, SLP Ⓗ
SLP Ⓗ
TO SERVO
VSS
LUMINANCE & CHROMINANCE PACK (VJB03271)
PLAY BACK VIDEO SIGNAL
NOISE
ARTIFICIAL H-GATE IC301-27
ARTIFICIAL V-SYNC IC301-26
V-sync
3.58 MHz VIDEO SIGNAL
LUMINANCE SIGNAL
4MHz
FL301
L.P.F
HSS
CLAMP
LUMINANCE, CHROMINANCE PACK-35
E-E 0.2V/20μsec.div. 0.49Vp-p
Non Linear Emphasis
Gain [dB]
-20dB
-10dB
0dB
500K 1M 2M 3M
Frequency [Hz]
LP Mode
200K 500K 2M 3M
SP Mode
VIDEO MUTE
EE AMP
E.E
V.V
Y-C MIXER
NOISE CANCELLAR
AGC
SUB CLAMP
P.B AMP
PICTURE CONTROL
DE-EMPHASIS
D.O.C PULSE
LIMITER
DIFFERENTIAL AMP 2
DIFFERENTIAL AMP 1
DEMODULATOR
DOUBLE LIMITER
DROP OUT COMPENSATOR
1H DELAY LINE
DL301
N.L-EMPHASIS/N.L-DE.EMPHASIS
MAIN EMPHASIS
(dB) MAIN EMPHASIS
100K 500K 2M (Hz)
WHITE/DARK CLIP
DEVIATION
FM MODULATOR
FM SIGNAL
MHz 4.4 3.4
SYNC TIP
WHITE LEVEL
FM MODURATION
SYNC SEPA
IC301 (VEFY009)
QR302
R310
QR303
LV SIGNAL
3.58MHz
X801
0.64Vp-p 3.58MHz
TO
L802, C807 L803
L.P.F
AMP
629K 3.4M 4.4M (Hz)
3.58MHz
FL802
3.58MHz B.P.F
629KHz
FL801
4.2MHz B.P.F
4.2MHz
170mVp-p 4.2MHz
P.B
REC
ACC
BALANCE MODULATOR 1
P.B:ON
1H DELAY LINE
DL801
REC AMP
COLOR KILLER SW
B/W
P.B AMP
AMP
IC801 (VEFC008)
C802, C803
SMOOTHING CIRCUIT
BALANCE MODULATOR 2
BURST PHASE COMPARATOR
AFC PHASE COMPARATOR
REC X'TAL VCO
P.B X'TAL VCO
APC PHASE COMPARATOR
VCO
1/320
FREQUENCY DETECTOR
1/2
1/4 DIVIDER
0° 90° 180° 270°
PHASE POTATION
629KHz ROTATION SIGNAL
1/4 RING COUNTER
DIGITAL PLL
KILLER PHASE COMPARATOR
THIS SIGNAL IS USED FOR OPERATION WHICH RECORDING CURRENT IS INCREASED IN LP OR SLP AND BURST GAIN IS INCREASED IN SP OR SLP DURING RECORDING MODE.
SP/LP/SLP DETECTOR
LV SIGNAL
FL801
1.4MHz L.P.F
1.4MHz
Q3004
BUFFER
HEAD
RF OUT
P3002-P502
P.B CHROMA
SP Ⓗ
P3001-P501
LP-SLP Ⓗ
REC CHROMA
EXCEPT REC +5V


PACK (VJB03271)
3.58MHz
TO SERVO
X801
0.64Vp-p 3.58MHz
L802,C807
L803
L.P.F
AMP
FL802
3.58MHz B.P.F
629K 3.4M 4.4M (Hz)
629KHz
4.2MHz
FL801
4.2MHz B.P.F
170mVp-p 4.2MHz
C802,C803
SMOOTHING CIRCUIT
BALANCE MODULATOR 2
BURST PHASE COMPARATOR
AFC PHASE COMPARATOR
REC X'TAL VCO
P.B X'TAL VCO
APC PHASE COMPARATOR
VCO
1/320
FREQUENCY DETECTOR
ACC
BALANCE MODULATOR 1
1/2
1/4 DIVIDER
PHASE POTATION
629KHz ROTATION SIGNAL
1/4 RING COUNTER
DIGITAL PLL
DL801
1H DELAY LINE
REC AMP
COLOR KILLER SW
B/W
P.B AMP
KILLER PHASE COMPARATOR
SP/LP/SLP DETECTOR
LV SIGNAL
IC801 (VEFC008)
THIS SIGNAL IS USED FOR OPERATION WHICH RECORDING CURRENT IS INCREASED IN LP OR SLP AND BURST GAIN IS INCREASED IN SP OR SLP DURING RECORDING MODE.
FL801
1.4MHz L.P.F
1.4MHz
Q3004
BUFFER
VIDEO MUTE
EE AMP
E.E V.V
Y-C MIXER
NOISE CANCELLAR
AGC
P.B AMP
SUB CLAMP
PICTURE CONTROL
CLAMP
DE-EMPHASIS
R310
QR303
LV SIGNAL
L-EMPHASIS/N.L-E.EMPHASIS
D.O.C PULSE
MAIN EMPHASIS
LIMITER
WHITE/DARK CLIP
DIFFERENTIAL AMP 2
DIFFERENTIAL AMP 1
DEVIATION
DEMODULATOR
FM MODULATOR
DEMODULATOR
DOUBLE LIMITER
SYNC SEPA
DROP OUT COMPENSATOR
1H DELAY LINE
DL301
QR302
01
Y009)
P.B
REC
P.B:ON
NORMAL
ONE CH OUT PICTURE
TWO CH OUT PICTURE
PLAYBACK PICTURE
HEAD AMP OUTPUT FM SIGNAL (Q513-Ⓔ)
HEAD SW (IC501-Ⓓ)
NORMAL HEAD AMP OUT
(1) ONE CH NOT IN GOOD CONDITION
(2) TWO CH NOT IN GOOD CONDITION
VIDEO HEAD CLOG/CRACK OR HEAD AMP IS NOT IN GOOD CONDITION.
HEAD AMP (VJB05076)
P3002-P502
ENVE SELECT SIG. TO SERVO
REW, REV Ⓗ/STOP Ⓜ/FF, CUE Ⓛ
HEAD AMP SW FROM SERVO
HEAD SW FROM SERVO
HEAD SW INPUT
30Hz 5Vp-p
629K 3.4M 4.4M (Hz)
3.4M 4.4M (Hz)
RF OUT
Q513
BUFFER
Q514
AMP
629KHz TRAP
L508, C528
PHASE COMPENSATOR
HEAD AMP OUTPUT
(RF SIGNAL) 170mVp-p
AGC DET
AGC AMP
AMP DETECTOR
PEAKING
H.A SW
ENVE DETECTOR
AMP DETECTOR
AMP
HEAD SW
IC501 (AN3310K)
P.B CHROMA
P503
LP-SLP-(L)
LP-SLP-(R)
SP-(R')
SP-(L')
Q509 (REC:ON)
Q506 (LP/SLP:ON)
Q508 (EXCEPT REC:ON)
Q505 (SP:ON)
Q510 (REC:ON)
Q507 (EXCEPT REC:ON)
Q511 (REC:ON)
Q512 (REC:ON)
SP Ⓗ
LP-SLP Ⓗ
REC CHROMA
P3001-P501
629KHz
H.P.F
L502,C502 L503,C503
H.P.F REMOVES FM SIGNAL AND NOISE COMPONENTS AROUND CHROMA SIGNAL AREAS BEFORE CHROMA MIXING.
SIGNAL
MHz
VR501
REC-Y
EXCEPT REC +5V
2-DOUBLE-VIDEO HEAD SYSTEM
MAIN SIGNAL PATH IN REC MODE
MAIN SIGNAL PATH IN PLAYBACK MODE
4.2MHz PHASE ROTATIONAL SIGNAL IN REC MODE
4.2MHz PHASE ROTATIONAL SIGNAL IN PLAYBACK MODE

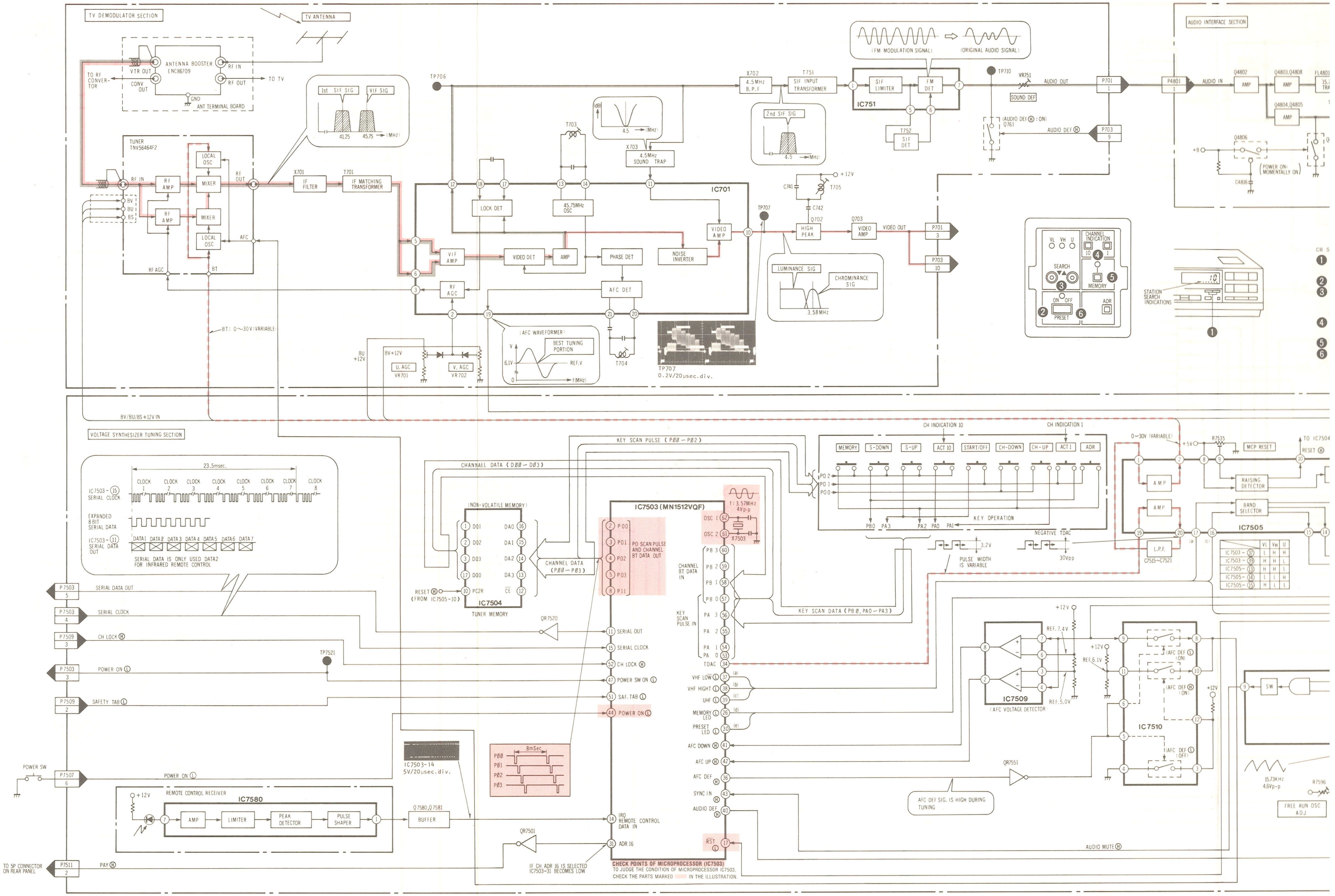
Next Page:
FM AUDIO Section

3-4. FM AUDIO BLOCK DIAGRAM


INPUT SELECT SW
LINE IN
ANT
DEMODU
MANUAL Ⓗ P4507 10
MIC Ⓗ P4504 1
P4501 3
LINE IN CH1 P4502 4
LINE IN CH2 P4502 6
TUNER CH1 P4503 1
TUNER CH2 P4503 2
MIC IN CH1 P4504 4
MIC IN CH2 P4504 2
+12V
IC4504
(INPUT SELECT)
INSIDE SWITCH TIMING
IC4504-15 MIC Ⓗ
IC4504-14 LINE Ⓗ
S1:ON S2:ON
S0:ON
IC4505 BUFFER
IC4507
IC4509
AGC ON
OFF
RECORDING VR
P7510 P4506
MIC IN Ⓗ P4504 1
E-E Ⓗ P4501 12
Q4501
HEAD PHONE VR VR6505
P6505 - P4508
HEAD PHONE JACK
TO METER 1 P6506 - P4507 8
TO METER 2 P6506 - P4507 7
REC MUT Ⓗ P4002 - P4501 18
LINE OUT
LINE OUT CH1 P4502 3
LINE OUT CH2 P4502 1
RF AUDIO OUT P4804 2
Q4801 BUFFER
AV OUT CH1 P4802 - P4503 4
AV OUT CH2 P4802 - P4503 5
LEVEL METER
TRACKING
STEREO LEFT RIGHT NORMAL
L dB R
-∞ 40 30 20 10 7 5 3 2 1 0 1 2 3 5 7 +10
IC4503
MIC MIXING CIRCUIT
(MIC IN V-V:SW ON)
Q4506
Q4522
QR4508
BILINGUAL Ⓗ P4503 3
P4501 - P4002 5
NORMAL AUDIO CIRCUIT
AUDIO HEAD
Q4505 BUFFER
P4501 - P4002 15
IC4501
(OUTPUT SELECT)
H.P. AMP
LINE AMP
MUT
CH SELECT
CONTROL LOGIC
Q4504 (REC MUT:ON)
Q4501 (MUT:ON)
Q4503 (REC MUT:ON)
Q4502 (MUT:ON)
MODE SW P4507 6
AUDIO OUTPUT SELECT SW
IF 24PIN BECOME HIGH LEVEL, OUTPUT IS CHANGED TO NORMAL.
P4507 4 NOR Ⓛ
P4507 2 R CH Ⓛ
P4507 5 L CH Ⓛ
P4507 3 STEREO Ⓛ
AUDIO MUTE Ⓗ P4501 11
FROM SYSTEM CONTROL
H.D Ⓛ P4507 1
MANU Ⓗ :AGC STOP
FL4503 20KHz L.P.F.
FL4504 20KHz L.P.F.
Q4523
Q4526 (MPX FL:ON)
Q4525
Q4527 (MPX FL:ON)
FILTER IN Ⓛ P4501 8
QR4504
AGC
AMP
IC4506 (A-6) FOR CH1
IC4508 (A-6) FOR CH2
HIGH FREQUENCY RANGE OF INPUT SIGNAL IS BOOSTED PRIOR TO RECORDING TO IMPROVE S/N RATIO OF HIGH FREQUENCY.
(P.B.)
(REC)
0dB
(CHARACTERISTIC OF DEEMPHASIS)
(CHARACTERISTIC OF PRE EMPHASIS)
OUTPUT (dB)
INPUT SIGNAL (dB)
(CHARACTERISTIC OF INPUT LEVEL SENSOR)
AMPLIFICATION (dB)
DETECTOR VOLTAGE (mV)
(CHARACTERISTIC OF VCA)
V.C.A : VOLTAGE CONTROL AMPLIFIER
(CHARACTERISTIC
REC: EMPHASIS I PB: DEEMPHASIS I
REC: PRE EMPHASIS I PB: DEEMPHASIS I
C4539
C4540
C4554
C4574
C4575
C4650
BUFFER AMP
C.C.A.
LEVEL SENSOR
REC
P.B.
REC: PRE EMPHASIS II
V-V Ⓗ
E-E Ⓗ
LIMITTER
DEVIATION
ERROR VOLTAGE
1.3MHz
1.7MHz
VCO
PHASE COMPARATOR
RF AMP
MUT
90° 180° 0°
CH1 P.B LEVEL VR4504
CH2 P.B LEVEL VR4508
20KHz L.P.F
HOLD
OR 2
OR 1
OR 4
OR 3
MMV
TPG (1)
TPG (2)
DOC DET
X 2


HIGH FREQUENCY RANGE OF INPUT SIGNAL IS BOOSTED PRIOR TO RECORDING TO IMPROVE S/N RATIO OF HIGH FREQUENCY.
(P.B.)
(REC)
(CHARACTERISTIC OF DEEMPHASIS)
(CHARACTERISTIC OF PRE EMPHASIS)
OUTPUT (dB)
INPUT SIGNAL (dB)
(CHARACTERISTIC OF INPUT LEVEL SENSOR)
AMPLIFICATION (dB)
DETECTOR VOLTAGE (mV)
(CHARACTERISTIC OF VCA)
V.C.A : VOLTAGE CONTROL AMPLIFIER
(CHARACTERISTIC OF WEIGHTING)
(CHARACTERISTIC OF ENCODE OUTPUT)
(CHARACTERISTIC OF DECORD OUTPUT)
THE LEVEL OF THIS PART IS LOWERED BY THE WEIGHTING CIRCUIT IN ORDER TO AVOID AMPLIFICATION PRIOR TO RECORDING.
IC4507
IC4509
AGC ON
OFF
MANU Ⓗ : AGC STOP
BILINGUAL Ⓗ
P4503
QR4508
Q4522
FL4503
20KHz L.P.F.
Q4523
Q4526 (MPX FL:ON)
REC : EMPHASIS I P.B : DEEMPHASIS I
C4539
C4540
C4554
BUFFER AMP
C.C.A.
AMP
AGC
LEVEL SENSOR
REC : PRE EMPHASIS II
WEIGHTING
DEVIATION (300KHz)
1.3MHz
IC4506 (A-6) FOR CH1
ERROR VOLTAGE
LIMITTER
DEVIATION
VCO
PHASE COMPARATOR
RF AMP
MUT
MUTE Ⓗ
DOC DET
TPG (1)
TPG (2)
X 2
OR 1
OR 2
MMV
HOLD
20KHz L.P.F
CH1 P.B LEVEL
VR4504
C4544, L4502, C4550
1.3MHz L.P.F.
REC CURR.
VR4503
Q4511 ~ Q4515
REC AMP
Q4507 (REC MUTE Ⓗ : ON)
Q4513
DECAYED REC 12V
P4501 9
EXCEPT REC 5V
P4501 10
CURR.EMPH. Ⓛ
P4501 14
REC MUTE Ⓗ
P4501 18
COMMON
P4505 2
Q4514 (PB : ON)
(AMPLIFIER)
IC4510
Q4516 (REC : ON)
Q4517 (REC : ON)
P4505 3
P4505 1
AL HEAD
AR HEAD
AUDIO HEAD
P4002
NORMAL AUDIO CIRCUIT
FILTER IN Ⓛ
P4501 8
QR4504
P4501 ~ P4002 15
Q4525
Q4527 (MPX FL:ON)
FL4504
IC4501
CH SELECT
CONTROL LOGIC
MODE SW
P4507 6
AUDIO OUTPUT SELECT SW
IF 24PIN BECOME HIGH LEVEL, OUTPUT IS CHANGED TO NORMAL.
P4507 4 NOR Ⓛ
P4507 2 R CH Ⓛ
P4507 5 L CH Ⓛ
P4507 3 STEREO Ⓛ
REC : PRE EMPHASIS I P.B : DEEMPHASIS I
C4574
C4575
C4650
DEVIATION (300KHz)
1.7MHz
R4668
C4579 C4580 R4669
IC4508 (A-6) FOR CH2
CH2 P.B LEVEL
VR4508
OR 3
OR 4
L4514, C4584
1.7MHz L.P.F.
IC4512
+B
Q4509 (REC MUTE Ⓗ : ON)
AUDIO HEAD SW
P4501 7
IC4511 (HEAD AMP)
S.W
Q4520 Q4521
FL4501 1.3MHz B.P.F.
FL4502 1.7MHz B.P.F.
Q4508 AMP
D4504, C4636 SMOOTHING CIRCUIT
DC
Q4524 BUFFER
ENVE LEVEL P4507 9
AUDIO MUTE Ⓗ P4501 11
E-E Ⓗ P4501 12
QR4507
NORMAL AUDIO Ⓗ
MUTE LEVEL P4501 ~ P4002 4
+5V
VR4505
MAIN SIGNAL PATH IN REC MODE
MAIN SIGNAL PATH IN PLAYBACK MODE

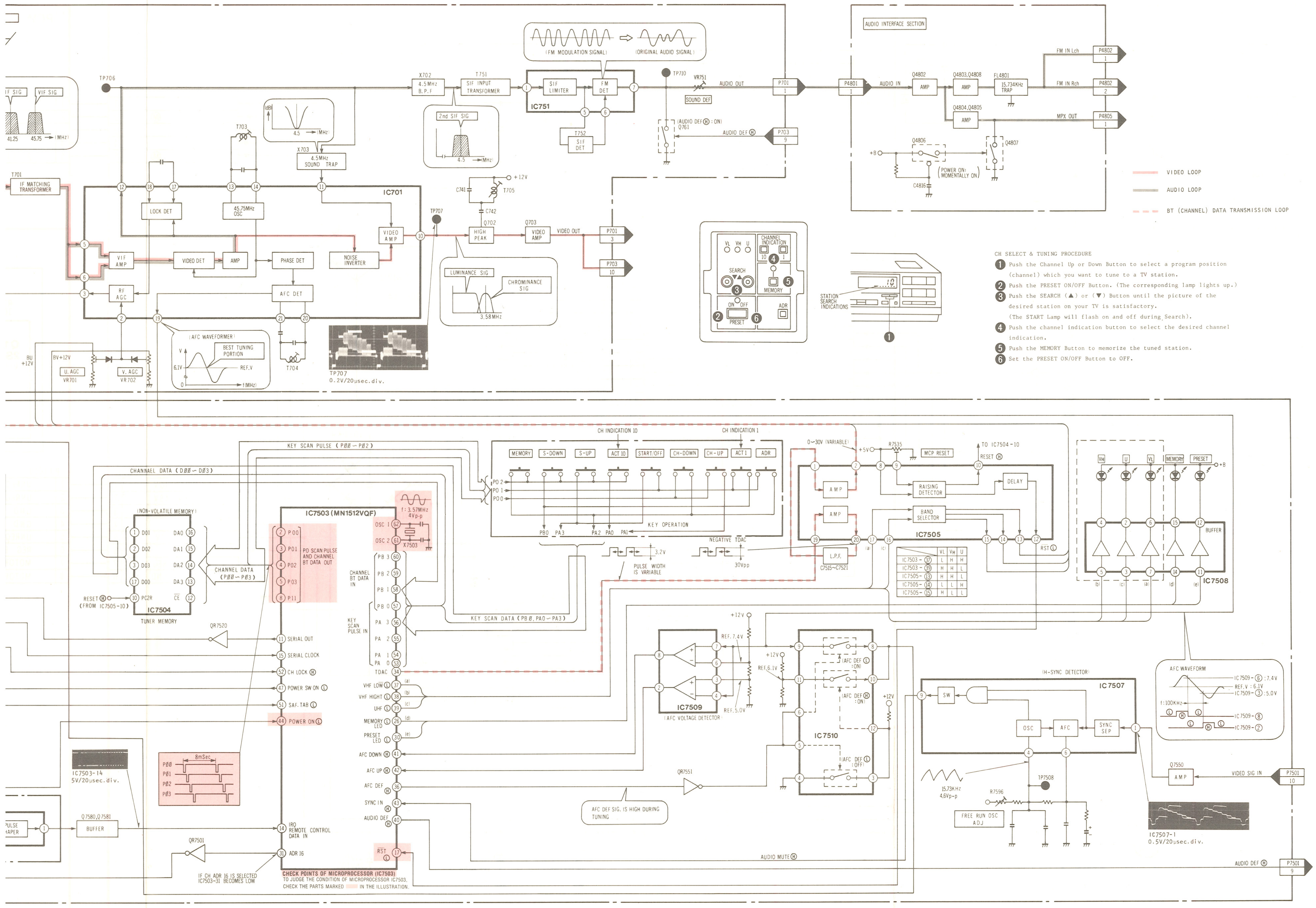
3-5. TUNER & TV DEMODULATOR BLOCK DIAGRAM



TV DEMODULATOR SECTION
TV ANTENNA
ANTENNA BOOSTER ENC86709
VTR OUT
RF IN
CONV OUT
RF OUT
TO TV
GND
ANT TERMINAL BOARD
TO RF CONVERTOR
TUNER TNV56464F2
RF AMP
MIXER
LOCAL OSC
RF OUT
AFC
RF AGC
BT
BV
BU
BS
X701 IF FILTER
T701 IF MATCHING TRANSFORMER
1st SIF SIG
VIF SIG
41.25
45.75
(MHz)
TP706
T703
45.75MHz OSC
LOCK DET
VIF AMP
VIDEO DET
AMP
PHASE DET
NOISE INVERTER
VIDEO AMP
RF AGC
AFC DET
IC701
X703 4.5MHz SOUND TRAP
4.5
(MHz)
dB
X702 4.5MHz B.P.F
T751 SIF INPUT TRANSFORMER
2nd SIF SIG
SIF LIMITER
FM DET
IC751
T752 SIF DET
(FM MODULATION SIGNAL)
(ORIGINAL AUDIO SIGNAL)
TP710
VR751
SOUND DEF
AUDIO OUT
P701
(AUDIO DEF Ⓗ : ON)
Q761
AUDIO DEF Ⓗ
P703
C741
C742
T705
+12V
TP707
Q702 HIGH PEAK
Q703 VIDEO AMP
VIDEO OUT
LUMINANCE SIG
CHROMINANCE SIG
3.58MHz
T704
TP707
0.2V/20μsec.div.
(AFC WAVEFORMER)
BEST TUNING PORTION
REF.V
6.1V
f(MHz)
BU +12V
BV+12V
U. AGC VR701
V. AGC VR702
BT: 0~30V (VARIABLE)
AUDIO INTERFACE SECTION
P4801
AUDIO IN
Q4802 AMP
Q4803,Q4808 AMP
Q4804,Q4805 AMP
Q4806
POWER ON: MOMENTALLY ON
C4816
VL VH U
CHANNEL INDICATION
SEARCH
MEMORY
ON OFF
PRESET
ADR
STATION SEARCH INDICATIONS
BV/BU/BS +12V IN
VOLTAGE SYNTHESIZER TUNING SECTION
23.5msec.
IC7503-⑮ SERIAL CLOCK
EXPANDED 8 BIT SERIAL DATA
IC7503-⑪ SERIAL DATA OUT
CLOCK 1 … CLOCK 8
DATA1 DATA2 DATA3 DATA4 DATA5 DATA6 DATA7
SERIAL DATA IS ONLY USED DATA2 FOR INFRARED REMOTE CONTROL
P7503 SERIAL DATA OUT
P7503 SERIAL CLOCK
P7509 CH LOCK Ⓗ
P7503 POWER ON Ⓛ
P7509 SAFETY TAB Ⓛ
POWER SW
P7507 POWER ON Ⓛ
TO 5P CONNECTOR ON REAR PANEL
P7511 PAY Ⓗ
CHANNEL DATA (D00~D03)
(NON-VOLATILE MEMORY)
IC7504 TUNER MEMORY
RESET Ⓗ (FROM IC7505-10)
CHANNEL DATA (P00~P03)
QR7520
TP7521
KEY SCAN PULSE (P00~P02)
IC7503 (MN1512VQF)
PO SCAN PULSE AND CHANNEL BT DATA OUT
OSC 1 OSC 2
f: 3.57MHz 4Vp-p
X7503
CHANNEL BT DATA IN
KEY SCAN PULSE IN
SERIAL OUT
SERIAL CLOCK
CH LOCK Ⓗ
POWER SW ON Ⓛ
SAF. TAB Ⓛ
POWER ON Ⓛ
TDAC
VHF LOW Ⓛ
VHF HIGHT Ⓛ
UHF Ⓛ
MEMORY LED Ⓛ
PRESET LED Ⓛ
AFC DOWN Ⓗ
AFC UP Ⓗ
AFC DEF Ⓗ
SYNC IN Ⓗ
AUDIO DEF Ⓗ
IRQ REMOTE CONTROL DATA IN
ADR 16
RST Ⓛ
IC7503-14 5V/20μsec.div.
8mSec
P00 P01 P02 P03
REMOTE CONTROL RECEIVER
IC7580
AMP LIMITER PEAK DETECTOR PULSE SHAPER
Q7580, Q7581 BUFFER
QR7501
IF CH ADR 16 IS SELECTED IC7503-31 BECOMES LOW
CHECK POINTS OF MICROPROCESSOR (IC7503)
TO JUDGE THE CONDITION OF MICROPROCESSOR IC7503, CHECK THE PARTS MARKED IN THE ILLUSTRATION.
CH INDICATION 10
CH INDICATION 1
MEMORY S-DOWN S-UP ACT 10 START/OFF CH-DOWN CH-UP ACT 1 ADR
KEY OPERATION
KEY SCAN DATA (PB0, PA0~PA3)
3.2V
PULSE WIDTH IS VARIABLE
NEGATIVE TDAC
30Vpp
0~30V (VARIABLE)
+5V
R7535
MCP RESET
TO IC7504 RESET Ⓗ
RAISING DETECTOR
BAND SELECTOR
AMP
L.P.F.
C7515~C7521
IC7505
IC7509 (AFC VOLTAGE DETECTOR)
REF. 7.4V
REF. 6.1V
REF. 5.0V
IC7510
(AFC DEF Ⓛ: ON)
(AFC DEF Ⓗ: ON)
(AFC DEF Ⓛ: OFF)
QR7551
AFC DEF SIG. IS HIGH DURING TUNING
AUDIO MUTE Ⓗ
SW
15.73KHz 4.6Vp-p
R7596
FREE RUN OSC ADJ

	VL	VH	U
IC7503-㊲	L	H	H
IC7503-㊳	H	H	H
IC7505-⑬	H	H	L
IC7505-⑭	L	H	H
IC7505-⑮	H	L	L

R BLOCK DIAGRAM


IF SIG
VIF SIG
41.25
45.75
(MHz)
TP706
T701
IF MATCHING TRANSFORMER
IC701
LOCK DET
45.75MHz OSC
T703
X703
4.5MHz SOUND TRAP
VIF AMP
VIDEO DET
AMP
PHASE DET
NOISE INVERTER
VIDEO AMP
RF AGC
AFC DET
(AFC WAVEFORM)
BEST TUNING PORTION
REF.V
f(MHz)
T704
TP707
0.2V/20μsec.div.
U. AGC
VR701
V. AGC
VR702
BV+12V
BU +12V
X702
4.5MHz B.P.F
T751
SIF INPUT TRANSFORMER
SIF LIMITER
FM DET
IC751
(FM MODULATION SIGNAL)
(ORIGINAL AUDIO SIGNAL)
2nd SIF SIG
T752
SIF DET
TP710
VR751
SOUND DEF
AUDIO OUT
(AUDIO DEF Ⓗ : ON)
Q761
AUDIO DEF Ⓗ
P701
P703
TP707
C741
T705
+12V
C742
Q702
HIGH PEAK
Q703
VIDEO AMP
VIDEO OUT
LUMINANCE SIG
CHROMINANCE SIG
3.58MHz
AUDIO INTERFACE SECTION
P4801
AUDIO IN
Q4802
AMP
Q4803,Q4808
AMP
FL4801
15.734KHz TRAP
FM IN Lch
FM IN Rch
P4802
Q4804,Q4805
AMP
MPX OUT
P4805
Q4806
+B
(POWER ON: MOMENTALLY ON)
Q4807
C4816
VIDEO LOOP
AUDIO LOOP
BT (CHANNEL) DATA TRANSMISSION LOOP
VL
VH
U
CHANNEL INDICATION
SEARCH
MEMORY
ON
OFF
PRESET
ADR
STATION SEARCH INDICATIONS
KEY SCAN PULSE (P00 – P02)
CHANNEL DATA (D00 – D03)
(NON-VOLATILE MEMORY)
IC7504
TUNER MEMORY
RESET Ⓗ
(FROM IC7505-10)
CHANNEL DATA (P00 – P03)
IC7503 (MN1512VQF)
P00
P01
P02
P03
P11
PO SCAN PULSE AND CHANNEL BT DATA OUT
OSC 1
OSC 2
f: 3.57MHz
4Vp-p
X7503
CHANNEL BT DATA IN
KEY SCAN PULSE IN
PB 3
PB 2
PB 1
PB 0
PA 3
PA 2
PA 1
PA 0
TDAC
SERIAL OUT
SERIAL CLOCK
CH LOCK Ⓗ
POWER SW ON Ⓛ
SAF. TAB Ⓛ
POWER ON Ⓛ
VHF LOW Ⓛ
VHF HIGHT Ⓛ
UHF Ⓛ
MEMORY LED Ⓛ
PRESET LED Ⓛ
AFC DOWN Ⓗ
AFC UP Ⓗ
AFC DEF Ⓗ
SYNC IN Ⓗ
AUDIO DEF Ⓗ
IRQ REMOTE CONTROL DATA IN
ADR 16
RST Ⓛ
CHECK POINTS OF MICROPROCESSOR (IC7503)
TO JUDGE THE CONDITION OF MICROPROCESSOR IC7503, CHECK THE PARTS MARKED IN THE ILLUSTRATION.
QR7520
QR7501
IF CH ADR 16 IS SELECTED IC7503-31 BECOMES LOW
IC7503-14
5V/20μsec.div.
8mSec
Q7580,Q7581
BUFFER
PULSE SHAPER
CH INDICATION 10
CH INDICATION 1
MEMORY
S-DOWN
S-UP
ACT 10
START/OFF
CH-DOWN
CH-UP
ACT 1
ADR
KEY OPERATION
KEY SCAN DATA (PB0, PA0 – PA3)
PULSE WIDTH IS VARIABLE
3.2V
NEGATIVE TDAC
30Vpp
0~30V (VARIABLE)
R7535
MCP RESET
TO IC7504-10
RESET Ⓗ
AMP
RAISING DETECTOR
DELAY
BAND SELECTOR
IC7505
L.P.F.
C7515~C7521
IC7508
BUFFER
IC7509
(AFC VOLTAGE DETECTOR)
REF. 7.4V
REF. 6.1V
REF. 5.0V
IC7510
(AFC DEF Ⓛ : ON)
(AFC DEF Ⓗ : ON)
(AFC DEF Ⓛ : OFF)
QR7551
AFC DEF SIG. IS HIGH DURING TUNING
(H-SYNC DETECTOR)
IC7507
SW
OSC
AFC
SYNC SEP
TP7508
R7596
FREE RUN OSC ADJ
15.73KHz 4.6Vp-p
AFC WAVEFORM
f: 100KHz
IC7507-1
0.5V/20μsec.div.
Q7550
AMP
VIDEO SIG IN
P7501
AUDIO MUTE Ⓗ
AUDIO DEF Ⓗ

	VL	VH	U
IC7503 – 37	L	H	H
IC7503 – 38	H	H	L
IC7505 – 13	H	H	L
IC7505 – 14	L	L	H
IC7505 – 15	H	L	L

CH SELECT & TUNING PROCEDURE

❶ Push the Channel Up or Down Button to select a program position (channel) which you want to tune to a TV station.

❷ Push the PRESET ON/OFF Button. (The corresponding lamp lights up.)

❸ Push the SEARCH (▲) or (▼) Button until the picture of the desired station on your TV is satisfactory.
(The START Lamp will flash on and off during Search).

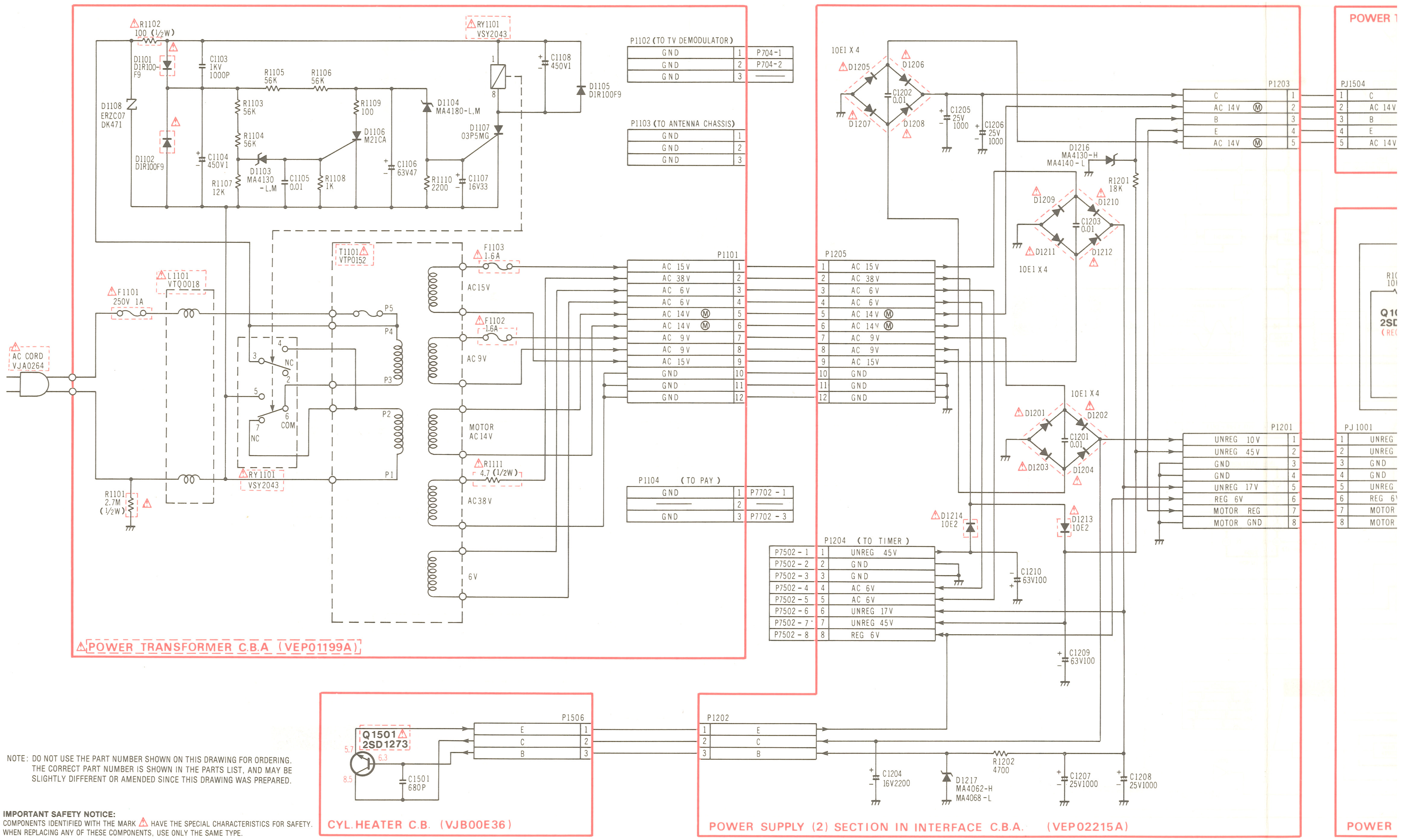
❹ Push the channel indication button to select the desired channel indication.

❺ Push the MEMORY Button to memorize the tuned station.

❻ Set the PRESET ON/OFF Button to OFF.

Next Page:
POWER TRANSFORMER &
POWER SUPPLY Section

3-6. POWER TRANSFORMER, POWER SUPPLY (2) & POWER SUPPLY SCHEMATIC DIAGRAM

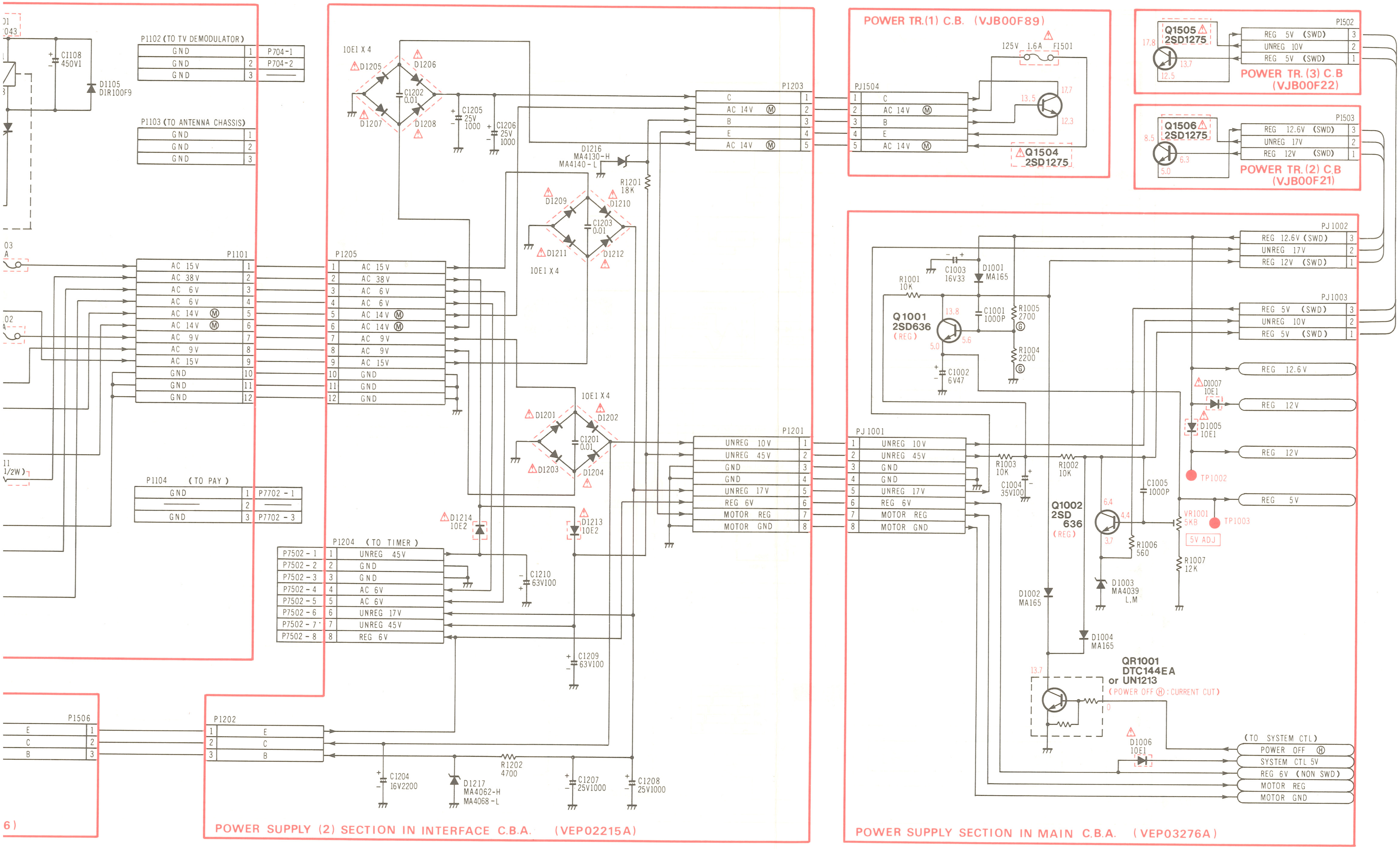


R1102 100 (1/2W)
D1101 D1R100-F9
C1103 1KV 1000P
R1105 56K
R1106 56K
RY1101 VSY2043
C1108 450V1
D1105 D1R100F9
D1108 ERZC07 DK471
R1103 56K
R1109 100
D1104 MA4180-L,M
D1106 M21CA
D1107 03P5MG
D1102 D1R100F9
C1104 450V1
R1104 56K
D1103 MA4130-L,M
C1105 0.01
R1108 1K
C1106 63V47
R1110 2200
C1107 16V33
R1107 12K
P1102 (TO TV DEMODULATOR)
GND
P704-1
P704-2
P1103 (TO ANTENNA CHASSIS)
T1101 VTP0152
F1103 1.6A
AC15V
F1102 1.6A
AC 9V
MOTOR AC14V
R1111 4.7 (1/2W)
AC38V
6V
P5
P4
P3
P2
P1
L1101 VTQ0018
F1101 250V 1A
AC CORD VJA0264
NC
COM
RY1101 VSY2043
R1101 2.7M (1/2W)
P1101
AC 15V
AC 38V
AC 6V
AC 14V Ⓜ
AC 9V
P1104 (TO PAY)
P7702-1
P7702-3
POWER TRANSFORMER C.B.A (VEP01199A)
10E1 X 4
D1205
D1206
C1202 0.01
D1207
D1208
C1205 25V 1000
C1206 25V 1000
P1203
C
AC 14V Ⓜ
B
E
D1216 MA4130-H MA4140-L
R1201 18K
D1209
D1210
C1203 0.01
D1211
D1212
P1205
10E1 X 4
D1201
D1202
C1201 0.01
D1203
D1204
P1201
UNREG 10V
UNREG 45V
UNREG 17V
REG 6V
MOTOR REG
MOTOR GND
D1214 10E2
D1213 10E2
P1204 (TO TIMER)
P7502-1
P7502-2
P7502-3
P7502-4
P7502-5
P7502-6
P7502-7
P7502-8
C1210 63V100
C1209 63V100
P1202
C1204 16V2200
D1217 MA4062-H MA4068-L
R1202 4700
C1207 25V1000
C1208 25V1000
POWER SUPPLY (2) SECTION IN INTERFACE C.B.A. (VEP02215A)
P1506
Q1501 2SD1273
5.7
6.3
8.5
C1501 680P
CYL.HEATER C.B. (VJB00E36)
PJ1504
PJ1001
POWER

NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING.
THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

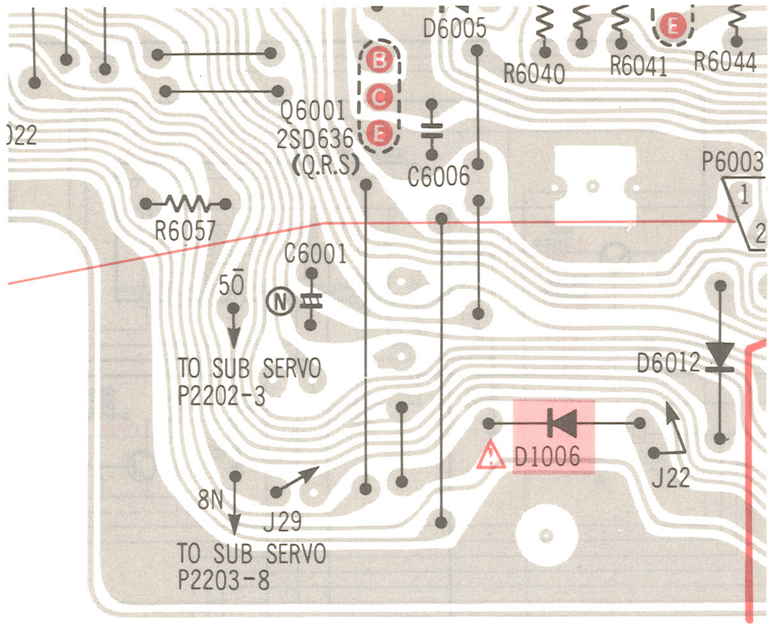
IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

POWER SUPPLY SCHEMATIC DIAGRAM

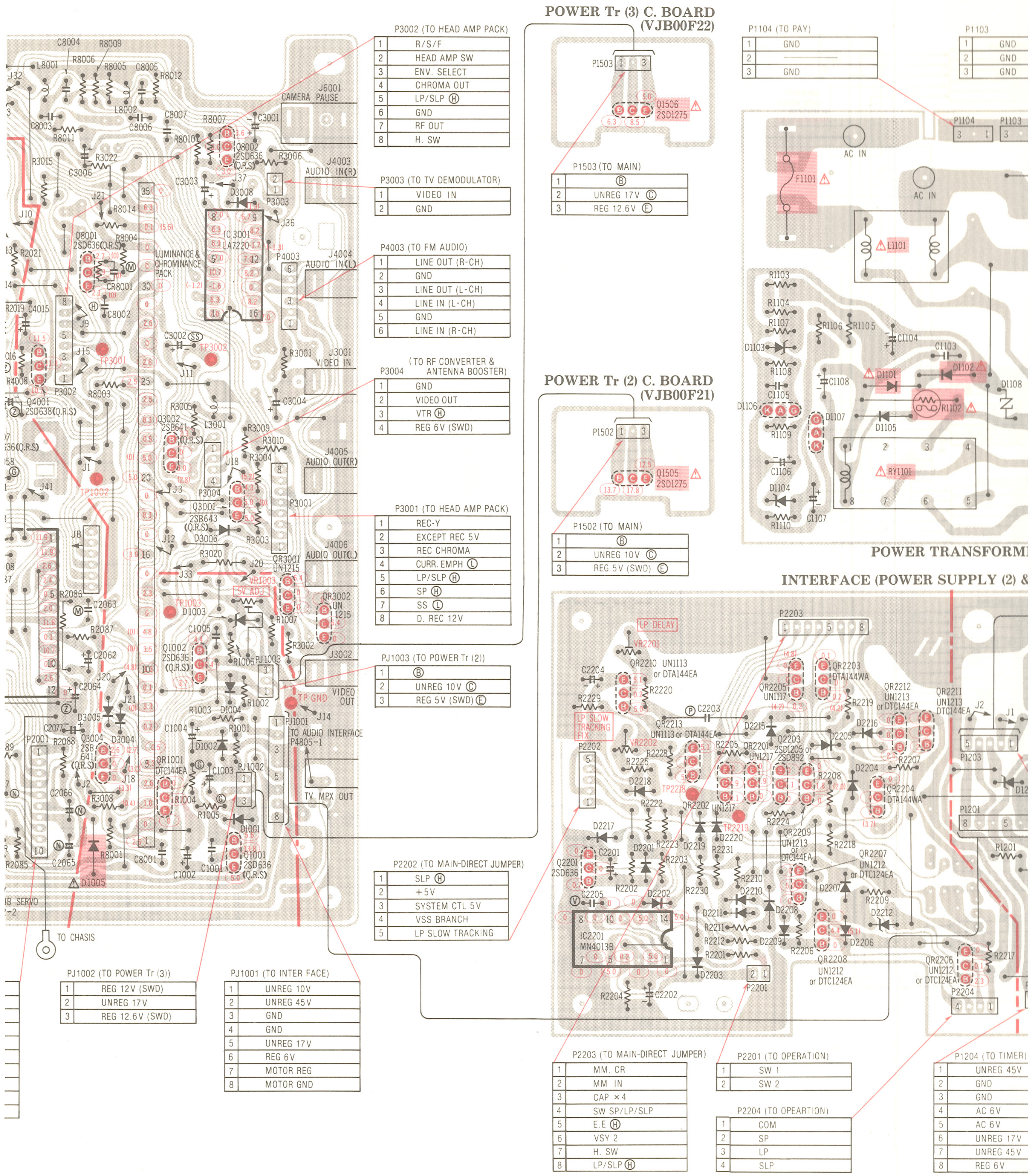


P1102 (TO TV DEMODULATOR)
GND 1 P704-1
GND 2 P704-2
GND 3
C1108 450V1
D1105 D1R100F9
P1103 (TO ANTENNA CHASSIS)
GND 1
GND 2
GND 3
P1101
AC 15V 1
AC 38V 2
AC 6V 3
AC 6V 4
AC 14V Ⓜ 5
AC 14V Ⓜ 6
AC 9V 7
AC 9V 8
AC 15V 9
GND 10
GND 11
GND 12
P1104 (TO PAY)
GND 1 P7702-1
2
GND 3 P7702-3
P1506
E 1
C 2
B 3
10E1 X 4
D1205
D1206
C1202 0.01
D1207
D1208
C1205 25V 1000
C1206 25V 1000
D1216 MA4130-H MA4140-L
R1201 18K
D1209
D1210
C1203 0.01
D1211
D1212
10E1 X 4
P1205
AC 15V 1
AC 38V 2
AC 6V 3
AC 6V 4
AC 14V Ⓜ 5
AC 14V Ⓜ 6
AC 9V 7
AC 9V 8
AC 15V 9
GND 10
GND 11
GND 12
10E1 X 4
D1201
D1202
C1201 0.01
D1203
D1204
D1214 10E2
D1213 10E2
C1210 63V100
C1209 63V100
P1204 (TO TIMER)
P7502-1 1 UNREG 45V
P7502-2 2 GND
P7502-3 3 GND
P7502-4 4 AC 6V
P7502-5 5 AC 6V
P7502-6 6 UNREG 17V
P7502-7 7 UNREG 45V
P7502-8 8 REG 6V
P1203
C 1
AC 14V Ⓜ 2
B 3
E 4
AC 14V Ⓜ 5
P1201
UNREG 10V 1
UNREG 45V 2
GND 3
GND 4
UNREG 17V 5
REG 6V 6
MOTOR REG 7
MOTOR GND 8
P1202
1 E
2 C
3 B
C1204 16V2200
D1217 MA4062-H MA4068-L
R1202 4700
C1207 25V1000
C1208 25V1000
POWER SUPPLY (2) SECTION IN INTERFACE C.B.A. (VEP02215A)
POWER TR.(1) C.B. (VJB00F89)
125V 1.6A F1501
PJ1504
1 C
2 AC 14V Ⓜ
3 B
4 E
5 AC 14V Ⓜ
13.5
17.7
12.3
Q1504 2SD1275
Q1505 2SD1275
17.8
13.7
12.5
P1502
REG 5V (SWD) 3
UNREG 10V 2
REG 5V (SWD) 1
POWER TR. (3) C.B (VJB00F22)
Q1506 2SD1275
8.5
6.3
5.0
P1503
REG 12.6V (SWD) 3
UNREG 17V 2
REG 12V (SWD) 1
POWER TR. (2) C.B (VJB00F21)
PJ1002
REG 12.6V (SWD) 3
UNREG 17V 2
REG 12V (SWD) 1
PJ1003
REG 5V (SWD) 3
UNREG 10V 2
REG 5V (SWD) 1
C1003 16V33
D1001 MA165
R1001 10K
Q1001 2SD636 (REG)
13.8
5.0
5.6
C1001 1000P
R1005 2700 Ⓖ
R1004 2200 Ⓖ
C1002 6V47
REG 12.6V
D1007 10E1
REG 12V
D1005 10E1
REG 12V
TP1002
REG 5V
TP1003
PJ1001
1 UNREG 10V
2 UNREG 45V
3 GND
4 GND
5 UNREG 17V
6 REG 6V
7 MOTOR REG
8 MOTOR GND
R1003 10K
C1004 35V100
R1002 10K
Q1002 2SD 636 (REG)
6.4
4.4
3.7
C1005 1000P
VR1001 5KB
5V ADJ
R1006 560
R1007 12K
D1003 MA4039 L.M
D1002 MA165
D1004 MA165
QR1001 DTC144EA or UN1213 (POWER OFF Ⓗ: CURRENT CUT)
13.7
0
D1006 10E1
(TO SYSTEM CTL)
POWER OFF Ⓗ
SYSTEM CTL 5V
REG 6V (NON SWD)
MOTOR REG
MOTOR GND
POWER SUPPLY SECTION IN MAIN C.B.A. (VEP03276A)

3-7. POWER TRANSFORMER, POWER SUPPLY (2) Section in Interface Circuit Board & POWER SUPPLY Section in Main Circuit Board (VEP011



D6005
R6040
R6041
R6044
Q6001
2SD636
(Q.R.S)
C6006
P6003
022
R6057
C6001
50
TO SUB SERVO
P2202-3
D6012
D1006
J22
8N
J29
TO SUB SERVO
P2203-8



POWER Tr (3) C. BOARD
(VJB00F22)
P1503
Q1506
2SD1275
POWER Tr (2) C. BOARD
(VJB00F21)
P1502
Q1505
2SD1275
AC IN
F1101
L1101
RY1101
POWER TRANSFORM
INTERFACE (POWER SUPPLY (2) &
LP DELAY
LP SLOW TRACKING
IC2201
MN4013B
IC3001
LA7220
CAMERA PAUSE
LUMINANCE & CHROMINANCE PACK
TO CHASIS
TV MPX OUT
VIDEO OUT
TO AUDIO INTERFACE

P3002 (TO HEAD AMP PACK)

1	R/S/F
2	HEAD AMP SW
3	ENV. SELECT
4	CHROMA OUT
5	LP/SLP Ⓗ
6	GND
7	RF OUT
8	H. SW

P3003 (TO TV DEMODULATOR)

1	VIDEO IN
2	GND

P4003 (TO FM AUDIO)

1	LINE OUT (R-CH)
2	GND
3	LINE OUT (L-CH)
4	LINE IN (L-CH)
5	GND
6	LINE IN (R-CH)

P3004 (TO RF CONVERTER & ANTENNA BOOSTER)

1	GND
2	VIDEO OUT
3	VTR Ⓗ
4	REG 6V (SWD)

P3001 (TO HEAD AMP PACK)

1	REC-Y
2	EXCEPT REC 5V
3	REC CHROMA
4	CURR. EMPH Ⓛ
5	LP/SLP Ⓗ
6	SP Ⓗ
7	SS Ⓛ
8	D. REC 12V

PJ1003 (TO POWER Tr (2))

1	Ⓑ
2	UNREG 10V Ⓒ
3	REG 5V (SWD) Ⓔ

P1503 (TO MAIN)

1	Ⓑ
2	UNREG 17V Ⓒ
3	REG 12.6V Ⓔ

P1502 (TO MAIN)

1	Ⓑ
2	UNREG 10V Ⓒ
3	REG 5V (SWD) Ⓔ

P1104 (TO PAY)

1	GND
2	——
3	GND

P1103

1	GND
2	GND
3	GND

PJ1002 (TO POWER Tr (3))

1	REG 12V (SWD)
2	UNREG 17V
3	REG 12.6V (SWD)

PJ1001 (TO INTER FACE)

1	UNREG 10V
2	UNREG 45V
3	GND
4	GND
5	UNREG 17V
6	REG 6V
7	MOTOR REG
8	MOTOR GND

P2202 (TO MAIN-DIRECT JUMPER)

1	SLP Ⓗ
2	+5V
3	SYSTEM CTL 5V
4	VSS BRANCH
5	LP SLOW TRACKING

P2203 (TO MAIN-DIRECT JUMPER)

1	MM. CR
2	MM IN
3	CAP ×4
4	SW SP/LP/SLP
5	E.E Ⓗ
6	VSY 2
7	H. SW
8	LP/SLP Ⓗ

P2201 (TO OPERATION)

1	SW 1
2	SW 2

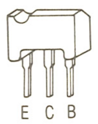
P2204 (TO OPEARTION)

1	COM
2	SP
3	LP
4	SLP

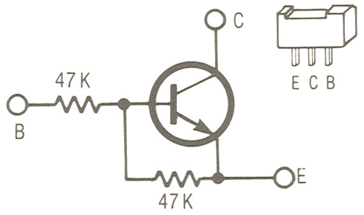
P1204 (TO TIMER)

1	UNREG 45V
2	GND
3	GND
4	AC 6V
5	AC 6V
6	UNREG 17V
7	UNREG 45V
8	REG 6V

ICs & TRANSISTORs INFORMATION

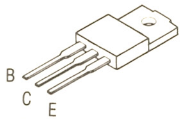


2SD636



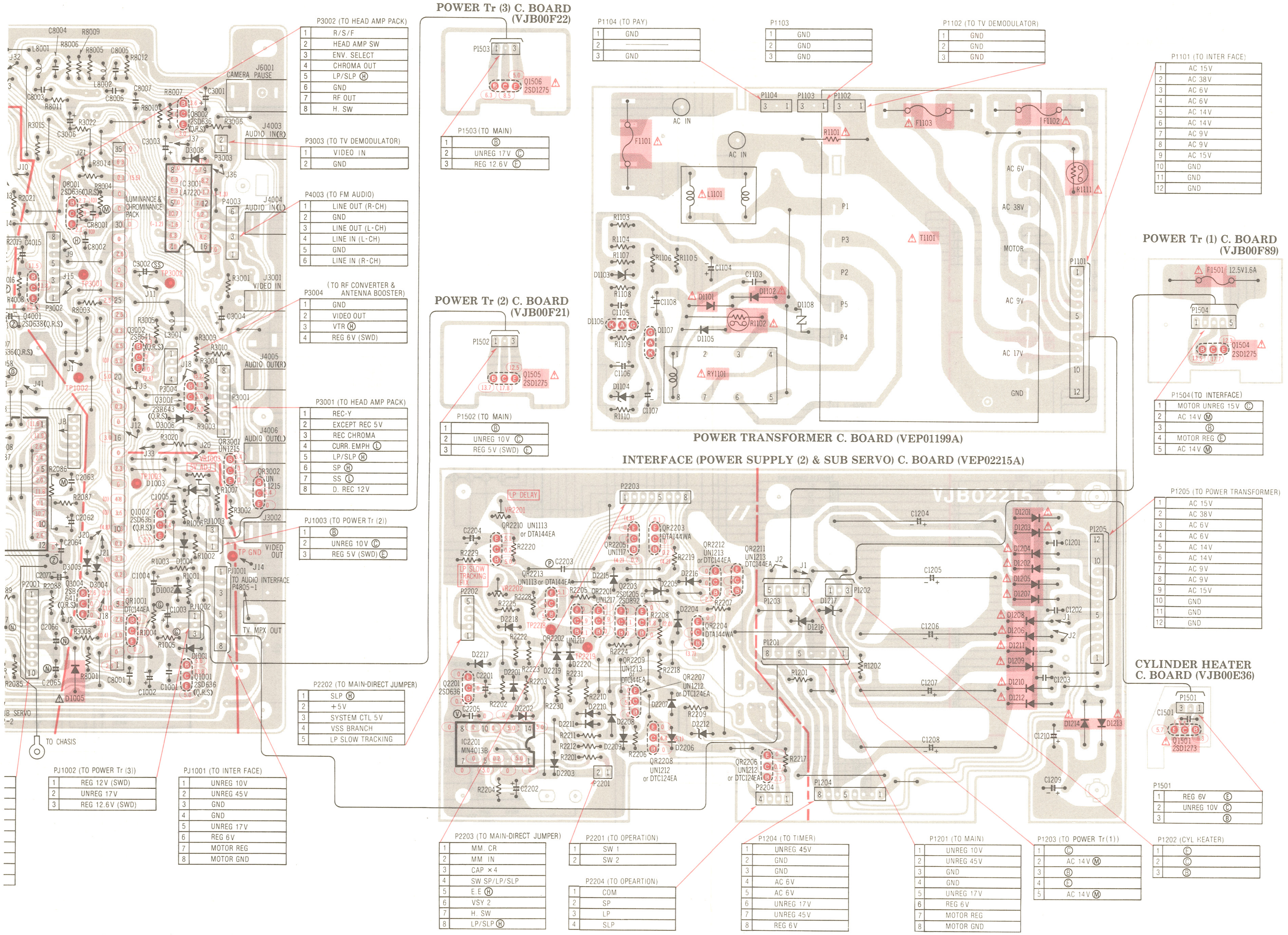
C
47K
B
E C B
47K
E

DTC144EA



2SD1273
2SD1275

PPLY (2) Section in Interface Circuit Board & POWER SUPPLY Section in Main Circuit Board (VEP01199A, VEP02215A, VEP03276A1)



POWER Tr (3) C. BOARD (VJB00F22)

POWER Tr (2) C. BOARD (VJB00F21)

POWER TRANSFORMER C. BOARD (VEP01199A)

INTERFACE (POWER SUPPLY (2) & SUB SERVO) C. BOARD (VEP02215A)

POWER Tr (1) C. BOARD (VJB00F89)

CYLINDER HEATER C. BOARD (VJB00E36)

P3002 (TO HEAD AMP PACK)

1	R/S/F
2	HEAD AMP SW
3	ENV. SELECT
4	CHROMA OUT
5	LP/SLP Ⓗ
6	GND
7	RF OUT
8	H. SW

P3003 (TO TV DEMODULATOR)

1	VIDEO IN
2	GND

P4003 (TO FM AUDIO)

1	LINE OUT (R-CH)
2	GND
3	LINE OUT (L-CH)
4	LINE IN (L-CH)
5	GND
6	LINE IN (R-CH)

P3004 (TO RF CONVERTER & ANTENNA BOOSTER)

1	GND
2	VIDEO OUT
3	VTR Ⓗ
4	REG 6V (SWD)

P3001 (TO HEAD AMP PACK)

1	REC-Y
2	EXCEPT REC 5V
3	REC CHROMA
4	CURR. EMPH Ⓛ
5	LP/SLP Ⓗ
6	SP Ⓗ
7	SS Ⓛ
8	D. REC 12V

PJ1003 (TO POWER Tr (2))

1	Ⓑ
2	UNREG 10V Ⓒ
3	REG 5V (SWD) Ⓔ

P1503 (TO MAIN)

1	Ⓑ
2	UNREG 17V Ⓒ
3	REG 12.6V Ⓔ

P1502 (TO MAIN)

1	Ⓑ
2	UNREG 10V Ⓒ
3	REG 5V (SWD) Ⓔ

P1104 (TO PAY)

1	GND
2	————
3	GND

P1103

1	GND
2	GND
3	GND

P1102 (TO TV DEMODULATOR)

1	GND
2	GND
3	GND

P1101 (TO INTER FACE)

1	AC 15V
2	AC 38V
3	AC 6V
4	AC 6V
5	AC 14V
6	AC 14V
7	AC 9V
8	AC 9V
9	AC 15V
10	GND
11	GND
12	GND

P1504 (TO INTERFACE)

1	MOTOR UNREG 15V Ⓒ
2	AC 14V Ⓜ
3	Ⓑ
4	MOTOR REG Ⓔ
5	AC 14V Ⓜ

P1205 (TO POWER TRANSFORMER)

1	AC 15V
2	AC 38V
3	AC 6V
4	AC 6V
5	AC 14V
6	AC 14V
7	AC 9V
8	AC 9V
9	AC 15V
10	GND
11	GND
12	GND

P1501

1	REG 6V Ⓔ
2	UNREG 10V Ⓒ
3	Ⓑ

P2202 (TO MAIN-DIRECT JUMPER)

1	SLP Ⓗ
2	+5V
3	SYSTEM CTL 5V
4	VSS BRANCH
5	LP SLOW TRACKING

PJ1002 (TO POWER Tr (3))

1	REG 12V (SWD)
2	UNREG 17V
3	REG 12.6V (SWD)

PJ1001 (TO INTER FACE)

1	UNREG 10V
2	UNREG 45V
3	GND
4	GND
5	UNREG 17V
6	REG 6V
7	MOTOR REG
8	MOTOR GND

P2203 (TO MAIN-DIRECT JUMPER)

1	MM. CR
2	MM IN
3	CAP ×4
4	SW SP/LP/SLP
5	E.E Ⓗ
6	VSY 2
7	H. SW
8	LP/SLP Ⓗ

P2201 (TO OPERATION)

1	SW 1
2	SW 2

P2204 (TO OPEARTION)

1	COM
2	SP
3	LP
4	SLP

P1204 (TO TIMER)

1	UNREG 45V
2	GND
3	GND
4	AC 6V
5	AC 6V
6	UNREG 17V
7	UNREG 45V
8	REG 6V

P1201 (TO MAIN)

1	UNREG 10V
2	UNREG 45V
3	GND
4	GND
5	UNREG 17V
6	REG 6V
7	MOTOR REG
8	MOTOR GND

P1203 (TO POWER Tr(1))

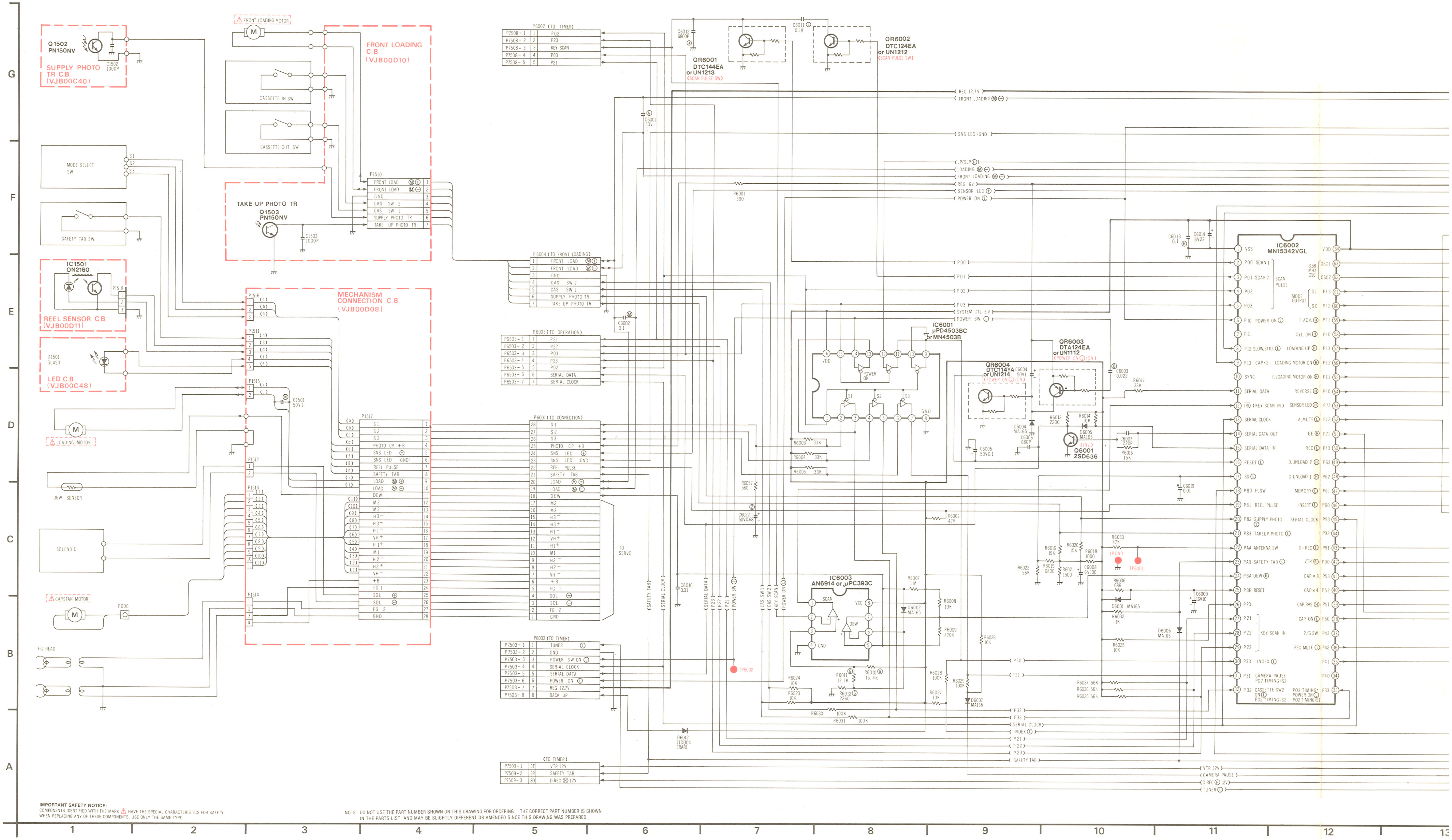
1	Ⓒ
2	AC 14V Ⓜ
3	Ⓑ
4	Ⓔ
5	AC 14V Ⓜ

P1202 (CYL HEATER)

1	Ⓔ
2	Ⓒ
3	Ⓑ

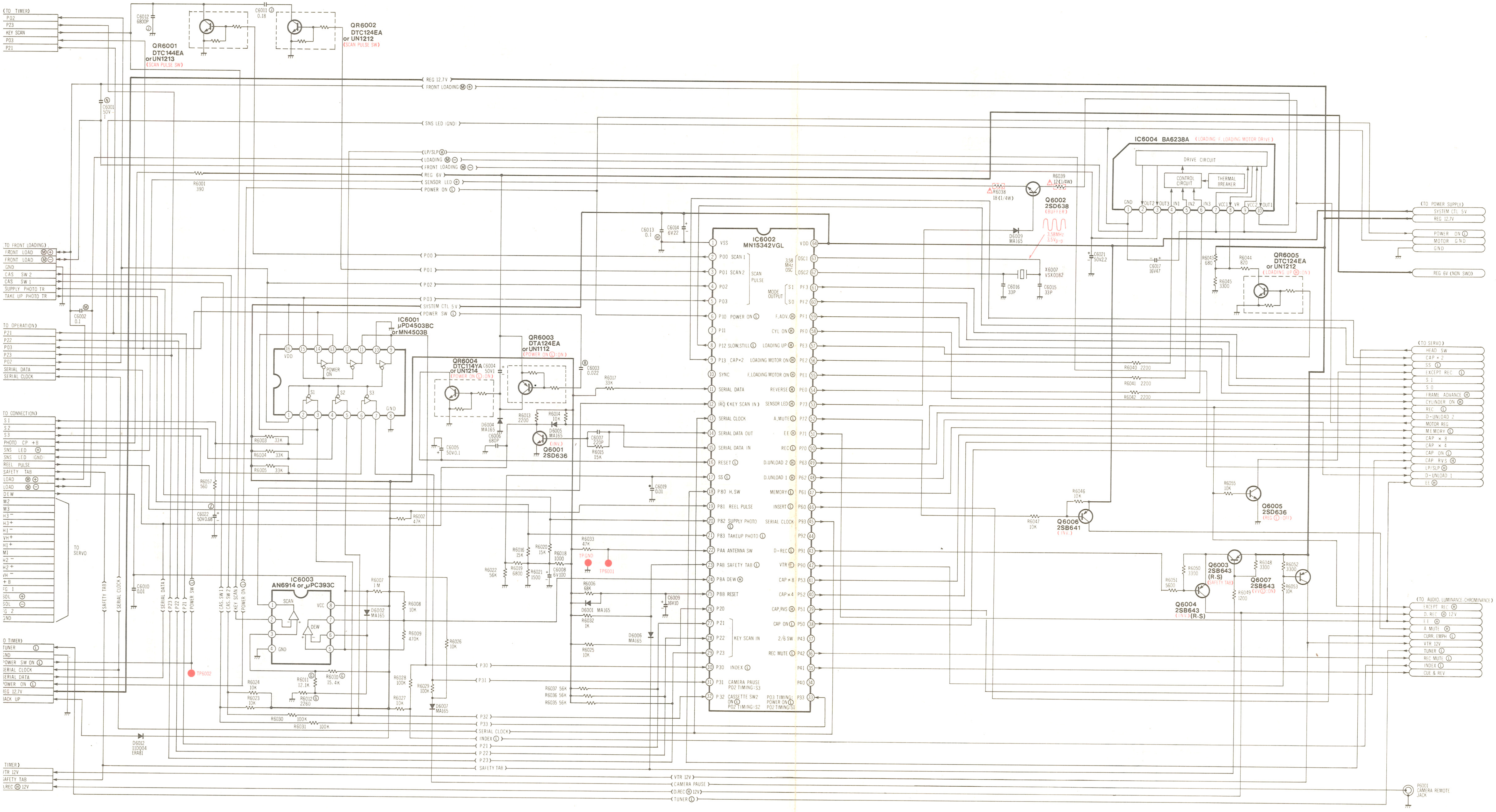
Next Page:
SYSTEM CONTROL Section

3-8. SYSTEM CONTROL SCHEMATIC DIAGRAM


Q1502
PN150NV
SUPPLY PHOTO TR C.B.
(VJB00C40)
C1502
1000P
FRONT LOADING MOTOR
FRONT LOADING C.B.
(VJB00D10)
CASSETTE IN SW
CASSETTE OUT SW
MODE SELECT SW
S1
S2
S3
SAFETY TAB SW
TAKE UP PHOTO TR
Q1503
PN150NV
C1503
1000P
P1510
FRONT LOAD
GND
CAS SW 2
CAS SW 1
SUPPLY PHOTO TR
TAKE UP PHOTO TR
IC1501
ON2160
P1518
REEL SENSOR C.B.
(VJB00D11)
D1501
GL450
LED C.B.
(VJB00C48)
MECHANISM CONNECTION C.B.
(VJB00D08)
P1516
P1511
P1515
C1501
50V1
P1517
LOADING MOTOR
DEW SENSOR
P1512
P1513
SOLENOID
CAPSTAN MOTOR
P006
P1514
FG HEAD
P6002 (TO TIMER)
P6004 (TO FRONT LOADING)
P6005 (TO OPERATION)
P6001 (TO CONNECTION)
P6003 (TO TIMER)
(TO TIMER)
TO SERVO
QR6001
DTC144EA
or UN1213
(SCAN PULSE SW)
QR6002
DTC124EA
or UN1212
(SCAN PULSE SW)
IC6001
μPD4503BC
or MN4503B
QR6003
DTA124EA
or UN1112
(POWER ON Ⓛ:ON)
QR6004
DTC114YA
or UN1214
(POWER ON Ⓛ:ON)
Q6001
2SD636
IC6003
AN6914 or μPC393C
IC6002
MN15342VGL
TP6002
TP6001
TP GND
REG 12.7V
FRONT LOADING
SNS LED (GND)
LP/SLP
LOADING
REG 6V
SENSOR LED
POWER ON
SYSTEM CTL 5V
POWER SW
SERIAL CLOCK
INDEX
SAFETY TAB
VTR 12V
CAMERA PAUSE
D.REC Ⓗ 12V
TUNER
A
B
C
D
E
F
G
1
2
3
4
5
6
7
8
9
10
11
12
13

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.


QR6001
DTC144EA
or UN1213
(SCAN PULSE SW)
QR6002
DTC124EA
or UN1212
(SCAN PULSE SW)
(TO TIMER)
REG 12.7V
FRONT LOADING
SNS LED (GND)
LP/SLP
LOADING
FRONT LOADING
REG 6V
SENSOR LED
POWER ON
IC6004 BA6238A (LOADING / LOADING MOTOR DRIVE)
DRIVE CIRCUIT
CONTROL CIRCUIT
THERMAL BREAKER
Q6002
2SD638
(BUFFER)
3.58MHz
(TO POWER SUPPLY)
SYSTEM CTL 5V
REG 12.7V
POWER ON
MOTOR GND
GND
REG 6V (NON SW0)
IC6002
MN15342VGL
X6007
VSX0082
QR6005
DTC124EA
or UN1212
(LOADING UP (H) ON)
TO FRONT LOADING
TO OPERATION
IC6001
μPD4503BC
or MN4503B
QR6003
DTA124EA
or UN1112
(POWER ON (L) ON)
QR6004
DTC114YA
or UN1214
(POWER ON (L) ON)
Q6001
2SD636
(INV.)
TO CONNECTION
TO SERVO
(TO SERVO)
Q6005
2SD636
(REG (L) OFF)
Q6006
2SB641
(INV.)
Q6003
2SB643
(R.S)
Q6007
2SB643
Q6004
2SB643
(INV.)(R.S)
IC6003
AN6914 or μPC393C
TO TIMER
TP6002
TPGND
TP6001
(TO AUDIO, LUMINANCE, CHROMINANCE)
TIMER
P6001
CAMERA REMOTE JACK

ART NUMBER IS SHOWN
WAS PREPARED.

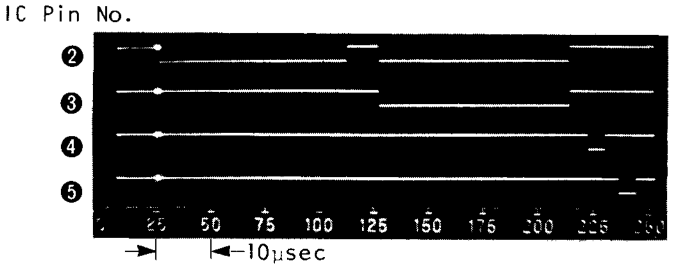
6 7 8 9 10 11 12 13 14 15 16 17

SYSTEM CONTROL SCHEMATIC	
Transistor	
Q1502	G-1
Q1503	F-3
Q6001	D-10
Q6002	F-14
Q6003	C-16
Q6004	C-15
Q6005	C-16
Q6006	C-14
Q6007	C-16
Transistor & Resistor	
QR6001	G-7
QR6002	G-8
QR6003	D-10
QR6004	D-9
QR6005	E-16
Integrated Circuit	
IC1501	E-1
IC6001	E-9
IC6002	E-11
IC6003	B-8
IC6004	F-15
Test Point	
TP6001	C-10
TP6002	B-7
TP GND	C-10
Connector	
P006	B-1
P1510	F-4
P1511	E-3
P1512	D-3
P1513	C-3
P1514	B-3
P1515	D-3
P1516	E-3
P1517	D-4
P1518	E-1
P6001	D-5
P6002	G-5
P6003	B-5
P6004	E-5
P6005	E-5

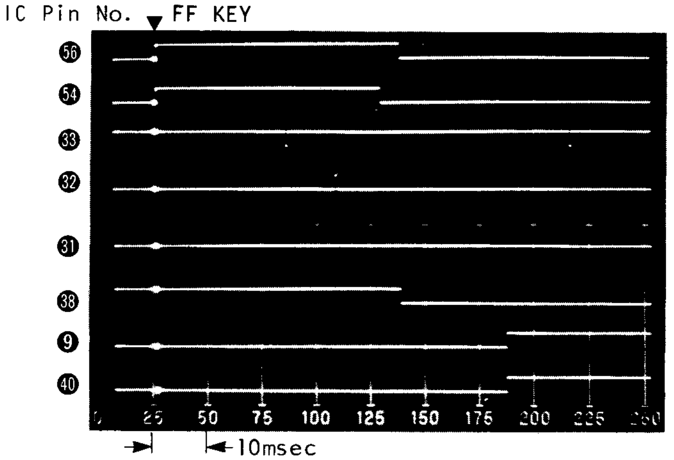
ADDRESS INFORMATION

MICROPROCESSOR IC6001 (MN15342VGL) MODE BY MODE TIMING CHART

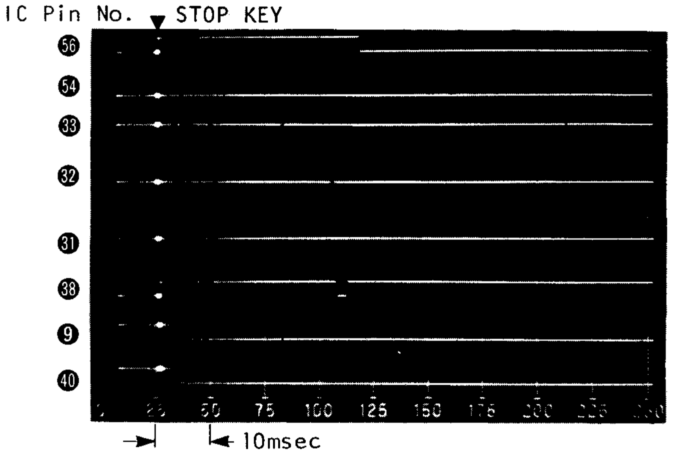
1.SCAN PULSES



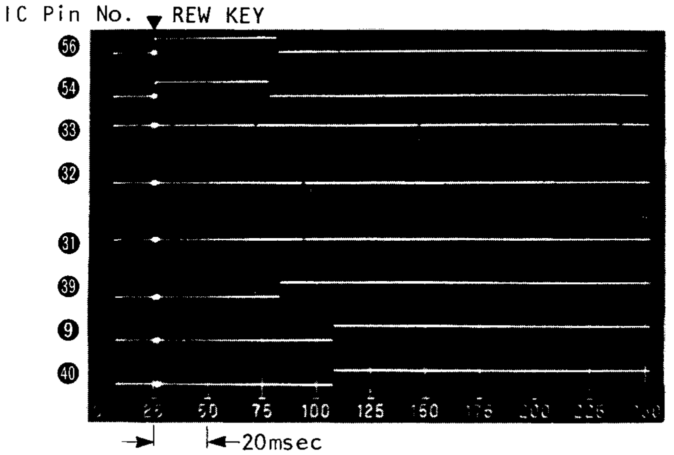
2.STOP → FF



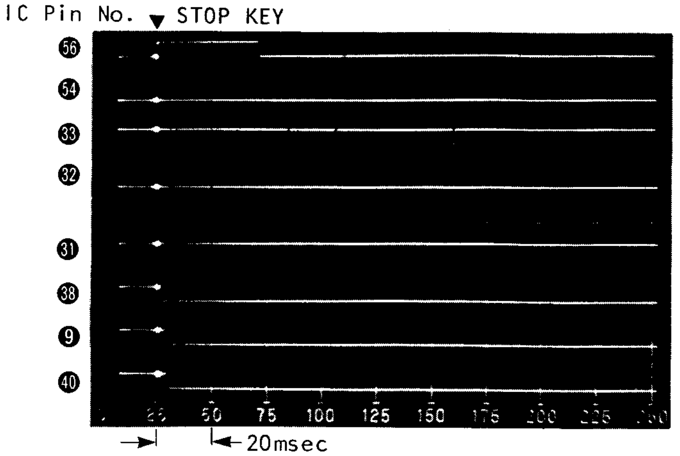
3.FF → STOP



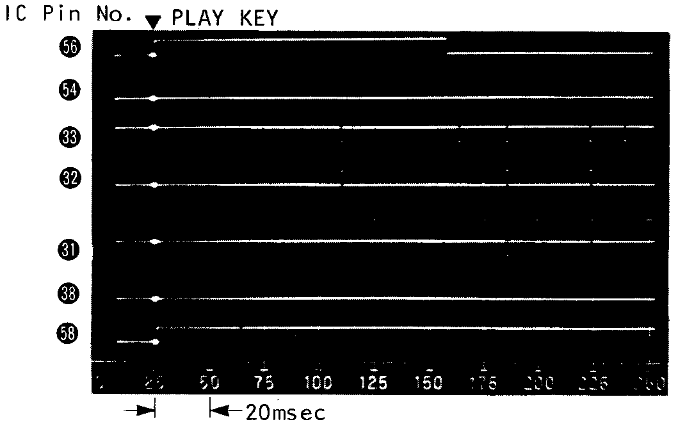
4.STOP → REW



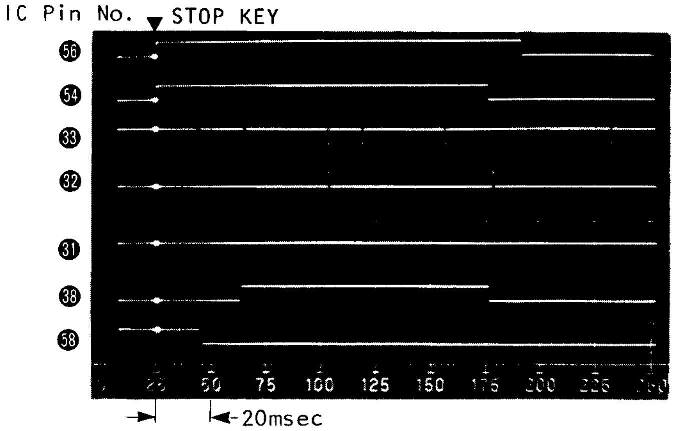
5.REW → STOP



6.STOP → PLAY



7.PLAY → STOP



SYSTEM CONTROL ICs VOLTAGE CHART (SP Mode)

REF. NO.	IC6001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
STOP	4.9	0	4.8	0	0	5.0	4.9	0	4.8	0	4.8	0	4.8	0.1	4.9	5.0				
PLAY	4.9	0	4.8	5.0	0.1	0	4.8	0	4.8	0	4.8	0	4.8	0.1	4.9	5.0				
REC	4.9	0	4.8	5.0	0.1	0	4.9	0	4.8	0	4.8	0	4.8	0.1	4.9	5.0				
F.F.	4.9	5.0	4.8	5.0	0.1	0	4.8	0	4.8	0	4.8	0	4.8	0.1	4.9	5.0				
REW	4.9	5.0	4.9	5.0	0.1	0	4.9	0	4.8	0	4.8	0	4.9	0.1	4.9	5.0				
REF. NO.	IC6002																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
STOP	0	4.4	4.6	4.9	4.9	0	5.0	4.8	0	3.8	5.0	4.9	4.5	0.5	4.6	5.0	2.6	0	3.3	3.0
PLAY	0	4.4	4.6	4.9	4.9	0	5.0	4.8	0	3.8	5.0	5.0	4.5	0.4	4.6	5.0	2.6	2.5	—	3.0
REC	0	4.4	4.6	4.9	4.9	0	5.0	4.8	0	3.8	5.0	5.0	4.5	0.4	4.6	5.0	2.6	2.5	—	3.0
F.F.	0	4.4	4.6	4.9	4.9	0	5.0	4.8	0	3.8	5.0	4.9	4.5	0.4	4.6	5.0	2.6	0	2.2	3.0
REW	0	4.4	4.6	4.9	4.9	0	5.0	4.8	0	3.8	5.0	5.0	4.5	0.6	4.6	5.0	2.6	0	2.2	3.0
REF. NO.	IC6002																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
STOP	3.0	4.9	0.7	0	4.9	5.0	4.9	4.9	4.9	4.7	4.9	0	4.8	0	0	5.0	0	4.9	0	0
PLAY	3.0	4.9	0.7	0	5.0	5.0	5.0	4.9	4.9	4.8	4.8	0.1	4.8	0	0	5.0	0	0	0	0
REC	3.0	4.9	0.7	0	5.0	5.0	5.0	4.9	5.0	4.8	4.8	0.1	4.8	0	0	5.0	0	0	0	0
F.F.	3.0	4.9	0.7	0	5.0	5.0	5.0	4.9	5.0	4.8	4.8	0.1	4.8	0	0	5.0	0	0	0	4.9
REW	3.0	5.0	0.7	0	5.0	5.0	5.0	5.0	5.0	4.8	4.9	0.1	4.9	0	0	5.0	0	4.9	4.9	4.9
REF. NO.	IC6002																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
STOP	0	0.2	11.7	0	4.5	4.9	5.0	0	0	4.8	4.2	5.0	0	0	0	0	4.9	0.1	0	0.1
PLAY	0	0.2	11.7	0	4.5	4.9	5.0	0	0	4.8	0.2	5.0	0	0	0	0	4.9	5.0	0	0.1
REC	0	0.2	0.3	0	4.5	4.9	5.0	0	0	0	4.2	5.0	0	0	0	0	4.9	5.0	0	0.1
F.F.	0	0.2	11.7	0	4.5	4.9	5.0	0	0	4.8	4.2	5.0	0.6	0	0	0	4.9	0.2	0	0.1
REW	0	0.2	11.7	0	4.5	4.9	5.0	0	0	4.8	4.2	5.0	0.6	0	0	0	4.9	0.2	0	0.1
REF. NO.	IC6002																			
MODE	61	62	63	64																
STOP	5.0	2.1	2.2	5.0																
PLAY	5.0	2.1	2.2	5.0																
REC	5.0	2.1	2.2	5.0																
F.F.	5.0	2.1	2.2	5.0																
REW	5.0	2.1	2.2	5.0																
REF. NO.	IC6003										IC6004									
MODE	1	2	3	4	5	6	7	8			1	2	3	4	5	6	7	8	9	10
STOP	4.9	0	2.4	0	0	0.4	0	5.0			0	0.6	0.6	0	0	0	12.2	6.2	12.2	0.6
PLAY	5.0	0	2.4	0	0	0.4	0	5.0			0	0.6	0.6	0	0	0	12.1	6.2	12.1	0.6
REC	4.9	0	2.4	0	0	0.4	0	5.0			0	0.6	0.6	0	0	0	12.1	6.2	12.1	0.6
F.F.	4.9	0	2.4	0	0	0.4	0	5.0			0	0.6	0.6	0	0	0	12.1	6.2	12.1	0.6
REW	4.9	0	2.4	0	0	0.4	0	5.0			0	0.6	0.6	0	0	0	12.1	6.2	12.1	0.6

SYSTEM CONTROL TRANSISTORs VOLTAGE CHART (SP Mode)

REF. NO.	Q6001			Q6002			Q6003			Q6004			Q6005			Q6006		
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
STOP	0	4.5	0	0	12.2	0.4	11.8	11.8	11.0	11.8	0	11.8	0	0.1	0.7	5.0	0.1	5.0
PLAY	0	4.6	0	0	12.1	0.4	11.8	11.8	11.0	11.8	0	11.8	0	0.1	0.7	5.0	0.1	5.0
REC	0	4.6	0	0	12.1	0.4	11.7	11.6	10.9	11.6	11.3	10.9	0	5.5	0	5.0	0.1	5.0
F.F.	0	4.6	0	0.5	12.0	0.9	11.8	11.8	11.0	11.7	0	11.7	0	0.1	0.7	5.0	0.1	5.0
REW	0	4.5	0	0.4	12.0	0.9	11.8	11.8	11.0	11.8	0	11.7	0	0.1	0.7	5.0	0.1	5.0
REF. NO.	Q6007																	
MODE	E	C	B															
STOP	11.8	11.6	11.0															
PLAY	11.8	11.6	11.0															
REC	11.7	11.6	11.0															
F.F.	11.8	11.6	11.0															
REW	11.8	11.6	11.0															
REF. NO.	QR6001			QR6002			QR6003			QR6004			QR6005					
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B			
STOP	0	0	4.4	0	0	4.6	5.7	0	5.6	0	5.0	0	0	0.1	4.9			
PLAY	0	0	4.4	0	0	4.6	5.7	0	5.6	0	5.0	0	0	0.1	4.9			
REC	0	0	4.4	0	0	4.6	5.7	0	5.6	0	5.0	0	0	0.1	4.9			
F.F.	0	0	4.4	0	0	4.6	5.7	0	5.6	0	5.0	0	0	0.1	4.9			
REW	0	0	4.4	0	0	4.6	5.7	0	5.6	0	5.0	0	0	0.1	4.9			

SYSTEM CONTROL ICs VOLTAGE CHART (LP Mode)

REF. NO.	IC6001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
STOP	4.9	0	4.8	0	0	5.0	4.9	0	4.8	0	4.8	0	4.8	0.1	4.9	5.0				
PLAY	4.9	0	4.8	5.0	0.1	0	4.9	0	4.9	0	4.9	3.8	4.8	0.1	4.9	5.0				
REC	4.9	0	4.8	5.0	0.1	0	4.8	0	4.9	0	4.9	3.8	4.8	0.1	4.9	5.0				
F.F.	4.9	5.0	4.9	5.0	0.1	0	4.9	0	4.8	0	4.8	0	4.9	0.1	4.9	5.0				
REW	4.9	5.0	4.9	5.0	0.1	0	4.9	0	4.8	0	4.8	0	4.9	0.1	4.9	5.0				

REF. NO.	IC6002																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
STOP	0	4.4	4.6	4.9	4.9	0	5.0	4.8	0	3.8	5.0	4.9	4.5	0.4	4.6	5.0	2.7	0	4.6	3.0
PLAY	0	4.4	4.7	4.9	4.9	0	5.0	4.9	0	3.8	5.0	5.0	4.5	0.5	4.6	5.0	2.7	2.5	—	3.0
REC	0	4.4	4.6	4.9	4.9	0	5.0	4.9	0	3.8	5.0	5.0	4.5	0.5	4.6	5.0	2.7	2.5	—	3.0
F.F.	0	4.4	4.6	4.9	4.9	0	5.0	4.8	0	3.8	5.0	5.0	4.5	0.5	4.6	5.0	2.7	0	2.2	3.0
REW	0	4.4	4.6	4.9	4.9	0	5.0	4.8	0	3.8	5.0	5.0	4.5	0.6	4.6	5.0	2.7	0	2.2	3.0

REF. NO.	IC6002																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
STOP	3.0	4.9	0.7	0	4.9	5.0	5.0	4.9	4.9	4.7	4.9	0	4.7	0	0	5.0	0	4.9	0	0.1
PLAY	3.0	5.0	0.7	0	5.0	5.0	5.0	5.0	5.0	4.9	4.9	0.1	4.8	0	0	5.0	0	0	0	0.1
REC	3.0	5.0	0.7	0	5.0	5.0	5.0	5.0	5.0	4.9	4.9	0.1	4.8	0	0	5.0	0	0.1	0	0.1
F.F.	3.0	5.0	0.7	0	5.0	5.0	5.0	5.0	5.0	4.8	4.9	0.1	4.9	0	0	5.0	0	0	0	4.9
REW	3.0	5.0	0.7	0	5.0	5.0	5.0	5.0	5.0	4.8	4.9	0.1	4.9	0	0	5.0	0	4.9	4.9	4.9

REF. NO.	IC6002																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
STOP	0	0.2	11.7	0	4.5	4.9	5.0	0	0	4.8	4.2	5.0	0	0	0	0	4.9	0.1	0	0.1
PLAY	0	0.2	11.7	0	4.5	4.9	5.0	0	0	4.8	0.2	5.0	0	0	0	0	4.9	5.0	0	0.1
REC	0	0.2	0.3	0	4.5	4.9	5.0	0	0	0	4.3	5.0	0	0	0	0	4.9	5.0	0	0.1
F.F.	0	11.8	11.8	0	4.5	4.9	5.0	0	0	4.8	4.2	5.0	0.6	0	0	0	4.9	0.2	0	0.1
REW	0	11.8	11.8	0	4.5	4.9	5.0	0	0	4.8	4.2	5.0	0.6	0	0	0	4.9	0.2	0	0.1

REF. NO.	IC6002																			
MODE	61	62	63	64																
STOP	5.0	2.1	2.2	5.0																
PLAY	5.0	2.1	2.2	5.0																
REC	5.0	2.1	2.2	5.0																
F.F.	5.0	2.1	2.2	5.0																
REW	5.0	2.1	2.2	5.0																

REF. NO.	IC6003										IC6004									
MODE	1	2	3	4	5	6	7	8			1	2	3	4	5	6	7	8	9	10
STOP	4.9	0	2.4	0	0	0.4	0	5.0			0	0.6	0.6	0	0	0	12.2	6.2	12.2	0.6
PLAY	5.0	0	2.4	0	0	0.4	0	5.0			0	0.6	0.6	0	0	0	12.1	6.2	12.1	0.6
REC	5.0	0	2.4	0	0	0.4	0	5.0			0	0.6	0.6	0	0	0	12.1	6.2	12.1	0.6
F.F.	5.0	0	2.4	0	0	0.4	0	5.0			0	0.6	0.6	0	0	0	12.1	6.2	12.1	0.6
REW	5.0	0	2.4	0	0	0.4	0	5.0			0	0.6	0.6	0	0	0	12.1	6.2	12.1	0.6

SYSTEM CONTROL ICs VOLTAGE CHART (SLP Mode)

REF. NO.	IC6001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
STOP	4.9	0	4.8	0	0	5.0	4.9	0	4.8	0	4.8	0	4.8	0.1	4.9	5.0				
PLAY	4.9	0	4.8	5.0	0.1	0	4.9	0	4.9	0	4.9	3.9	4.8	0.1	4.9	5.0				
REC	4.9	0	4.8	5.0	0.1	0	4.9	0	4.9	0	4.9	3.9	4.8	0.1	4.9	5.0				
F.F.	4.9	5.0	4.9	5.0	0.1	0	4.9	0	4.8	0	4.8	0.1	2.9	0.1	4.9	5.0				
REW	4.9	5.0	4.9	5.0	0.1	0	4.9	0	4.8	0	4.8	0.1	4.9	0.1	4.9	5.0				

REF. NO.	IC6002																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
STOP	0	4.4	4.6	4.9	4.9	0	5.0	4.8	0	3.8	5.0	5.0	4.5	0.5	4.6	5.0	2.7	0	4.1	3.0
PLAY	0	4.4	4.6	4.9	4.9	0.1	5.0	4.9	0	3.8	5.0	5.0	4.5	0.5	4.6	5.0	2.7	2.5	—	3.0
REC	0	4.4	4.6	4.9	4.9	0	5.0	4.9	0	4.8	5.0	5.0	4.5	0.5	4.6	5.0	2.7	2.5	—	3.0
F.F.	0	4.4	4.6	4.9	4.9	0.1	5.0	4.8	0	3.8	5.0	5.0	4.5	0.5	4.6	5.0	2.7	0	2.2	3.0
REW	0	4.4	4.6	4.9	4.9	0.1	5.0	4.8	0	3.8	5.0	5.0	4.5	0.5	4.6	5.0	2.7	0	2.2	3.0

REF. NO.	IC6002																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
STOP	3.0	5.0	0.7	0	5.0	5.0	5.0	5.0	5.0	4.8	4.9	0	4.8	0	0	5.0	0	4.9	0	0.1
PLAY	3.0	5.0	0.7	0	5.0	5.0	4.9	4.9	5.0	4.9	4.9	0.1	4.8	0	0	5.0	0	0.1	0	0.1
REC	3.0	5.0	0.7	0	4.9	5.0	5.0	5.0	5.0	4.9	4.9	0.1	4.8	0	0	5.0	0	0	0	0.1
F.F.	3.0	5.0	0.7	0	5.0	5.0	5.0	5.0	5.0	4.8	4.9	0.1	4.9	0	0	5.0	0	0.1	0	4.9
REW	3.0	5.0	0.7	0	5.0	5.0	5.0	5.0	5.0	4.8	4.9	0.1	4.9	0	0	5.0	0	4.9	4.9	4.9

REF. NO.	IC6002																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
STOP	0	11.8	11.8	0	4.5	4.9	5.0	0	0	4.8	4.2	5.0	0	0	0	0	4.9	0.1	0	0
PLAY	0	0.2	11.8	0	4.5	4.9	5.0	0	0	4.8	0.2	5.0	0.1	0.1	0.1	0.1	4.9	5.0	0.1	0.1
REC	0	11.7	0.3	0	4.5	4.9	5.0	0	0	0	4.3	5.0	0	0	0	0	4.9	5.0	0	0.1
F.F.	0	0.2	11.8	0	4.5	4.9	5.0	0	0	4.8	4.2	5.0	0.6	0	0	0	4.9	0.2	0	0.1
REW	0	0.2	11.8	0	4.5	4.9	5.0	0	0	4.8	4.2	5.0	0.6	0	0	0.1	4.9	0.2	0	0.1

REF. NO.	IC6002																			
MODE	61	62	63	64																
STOP	5.0	2.1	2.2	5.0																
PLAY	5.0	2.1	2.2	5.0																
REC	5.0	2.1	2.2	5.0																
F.F.	5.0	2.1	2.2	5.0																
REW	5.0	2.1	2.2	5.0																

REF. NO.	IC6003										IC6004									
MODE	1	2	3	4	5	6	7	8			1	2	3	4	5	6	7	8	9	10
STOP	5.0	0	2.4	0	0	0.4	0	5.0			0	0.6	0.6	0	0	0	12.2	6.2	12.2	0.6
PLAY	5.0	0	2.4	0	0	0.4	0	5.0			0	0.6	0.6	0.1	0.1	0.1	12.1	6.3	12.1	0.6
REC	5.0	0	2.4	0	0	0.4	0	5.0			0	0.6	0.6	0	0	0	12.1	6.2	12.1	0.6
F.F.	5.0	0	2.4	0	0	0.4	0	5.0			0	0.6	0.6	0	0	0	12.1	6.2	12.1	0.6
REW	5.0	0	2.4	0	0	0.4	0	5.0			0	0.6	0.6	0.1	0	0	12.1	6.2	12.1	0.6

SYSTEM CONTROL CIRCUIT BOARD	
Transistor	
Q1502	C-2
Q1503	D-2
Q6001	C-7
Q6002	C-8
Q6003	E-7
Q6004	E-8
Q6005	E-9
Q6006	E-7
Q6007	E-8
Transistor & Resistor	
QR6001	D-6
QR6002	D-6
QR6003	D-7
QR6004	D-7
QR6005	C-7
Integrated Circuit	
IC1501	E-3
IC6001	E-6
IC6002	D-7
IC6003	C-6
IC6004	C-8
Test Point	
TP6001	D-6
TP6002	D-6
TP GND	D-6

ADDRESS INFORMATION

SYSTEM CONTROL TRANSISTORs VOLTAGE CHART (LP Mode)

REF. NO.	Q6001			Q6002			Q6003			Q6004			Q6005			Q6006		
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
STOP	0	4.5	0	0	12.2	0.4	11.8	11.8	11.0	11.8	0	11.8	0	0.1	0.7	5.0	0.1	5.0
PLAY	0	4.6	0.2	0.1	12.1	0.6	11.8	11.7	11.0	11.7	0	11.7	0	0.1	0.7	5.0	0.1	5.0
REC	0	4.5	0.2	0.1	12.1	0.6	11.7	11.6	10.9	11.6	11.3	10.9	0	5.5	0	5.0	0.1	5.0
F.F.	0	4.5	0.2	0.6	12.0	1.0	11.8	11.8	11.0	11.8	0	11.8	0	0.1	0.7	5.0	0.1	5.0
REW	0	4.6	0.2	0.5	12.0	1.0	11.8	11.8	11.0	11.8	0	11.8	0	0.1	0.7	5.0	0.1	5.0

REF. NO.	Q6007																	
MODE	E	C	B															
STOP	11.8	11.6	11.0															
PLAY	11.8	11.6	11.0															
REC	11.7	11.6	11.0															
F.F.	11.8	0	11.8															
REW	11.8	0	11.8															

REF. NO.	QR6001			QR6002			QR6003			QR6004			QR6005					
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B			
STOP	0	0	4.4	0	0	4.6	5.7	0	5.6	0	5.0	0	0	0.1	4.9			
PLAY	0	0	4.4	0	0	4.7	5.7	0	5.6	0	5.0	0	0	0.1	4.9			
REC	0	0	4.4	0	0	4.6	5.7	0.1	5.6	0	5.0	0	0	0.1	4.9			
F.F.	0	0	4.4	0	0	4.6	5.7	0	5.7	0	5.0	0	0	0.1	4.9			
REW	0	0	4.4	0	0	4.6	5.7	0	5.6	0	5.0	0	0	0.1	4.9			

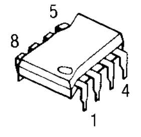
SYSTEM CONTROL TRANSISTORs VOLTAGE CHART (SLP Mode)

REF. NO.	Q6001			Q6002			Q6003			Q6004			Q6005			Q6006		
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
STOP	0	4.6	0.2	0.1	12.2	0.5	11.8	11.8	11.0	11.8	0	11.8	0	0.1	0.7	5.0	0.1	5.0
PLAY	0	4.6	0.2	0.1	12.1	0.6	11.8	11.8	11.1	11.8	0	11.8	0	0.1	0.7	5.0	0.1	5.0
REC	0	4.5	0.2	0.1	12.1	0.6	11.8	11.6	11.0	11.6	11.3	10.9	0	5.5	0	5.0	0.1	5.0
F.F.	0	4.5	0.2	0.6	12.0	1.0	11.8	11.8	11.6	11.8	0	11.8	0	0.1	0.7	5.0	0.1	5.0
REW	0	4.5	0.2	0.6	12.0	1.0	11.8	11.8	11.0	11.8	0	11.8	0	0.1	0.7	5.0	0.1	5.0

REF. NO.	Q6007																	
MODE	E	C	B															
STOP	11.8	0	11.8															
PLAY	11.8	11.7	11.1															
REC	11.8	0	11.7															
F.F.	11.8	11.7	11.1															
REW	11.8	11.7	11.0															

REF. NO.	QR6001			QR6002			QR6003			QR6004			QR6005					
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B			
STOP	0	0	4.4	0	0	4.6	5.7	0	5.6	0	5.0	0	0	0.1	4.9			
PLAY	0	0	4.4	0	0	4.7	5.7	0	5.6	0	5.0	0	0	0.1	4.9			
REC	0	0	4.4	0	0	4.6	5.7	0	5.6	0	5.0	0	0	0.1	4.9			
F.F.	0	0	4.4	0	0	4.7	5.7	0	5.7	0	5.0	0	0	0.1	4.9			
REW	0	0	4.4	0	0	4.7	5.7	0	5.7	0	5.0	0	0	0.1	4.9			

ICs & TRANSISTORs INFORMATION



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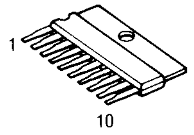

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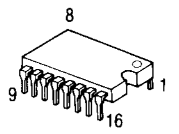

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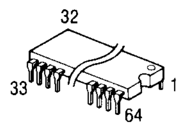

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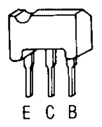

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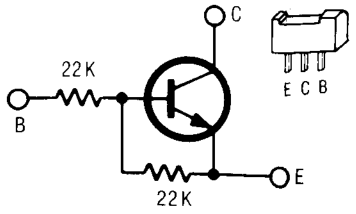

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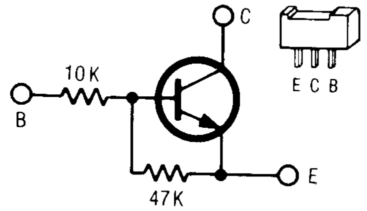

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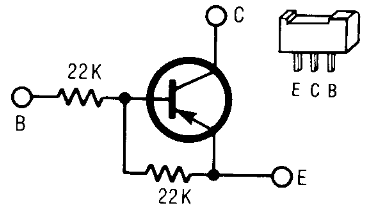

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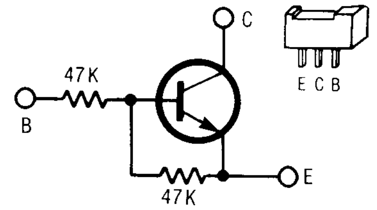
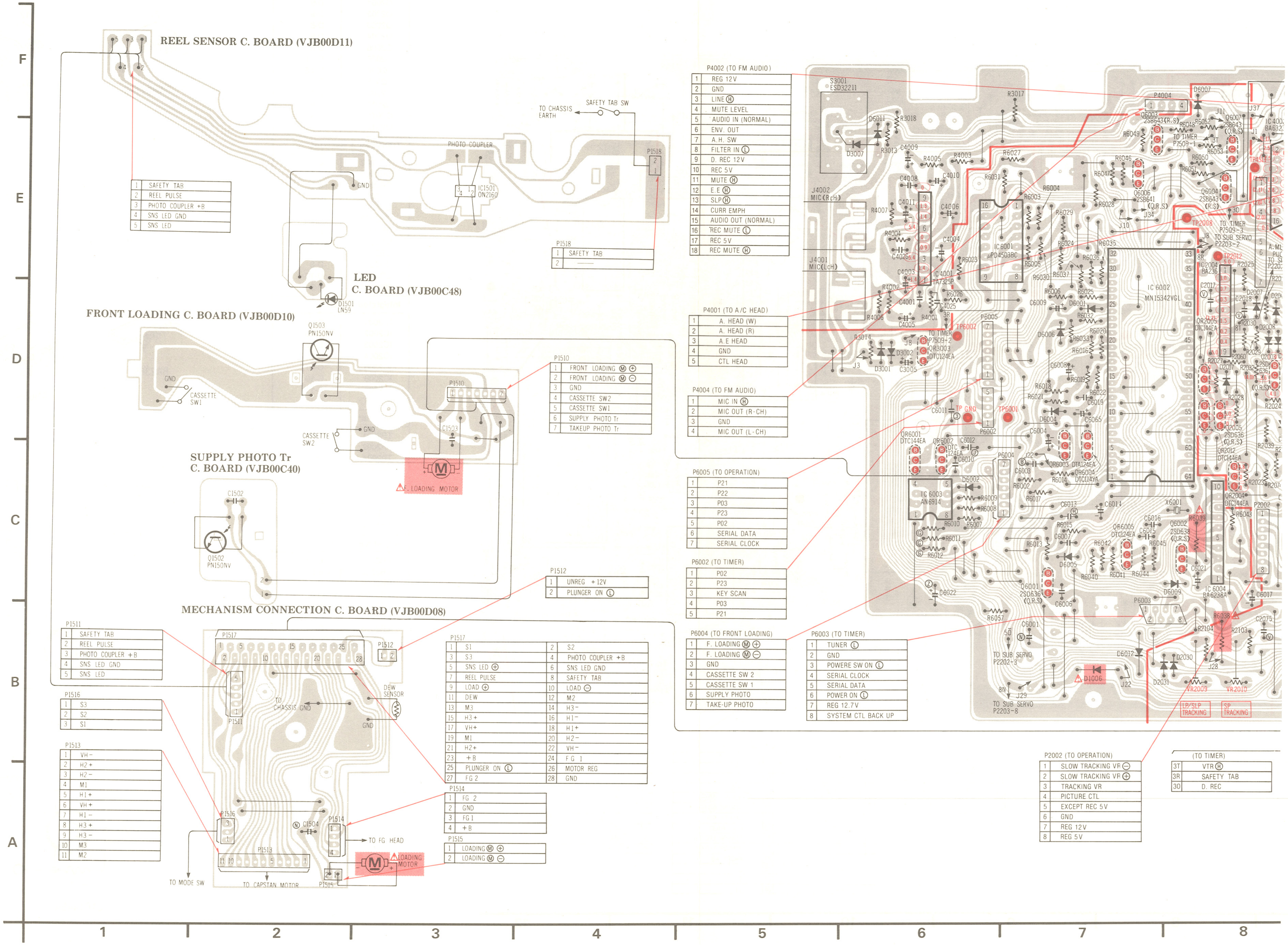


DTC144EA

3-9. SYSTEM CONTROL Section in Main Circuit Board (VEP03276A1)


F
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8
REEL SENSOR C. BOARD (VJB00D11)
LED C. BOARD (VJB00C48)
FRONT LOADING C. BOARD (VJB00D10)
SUPPLY PHOTO Tr C. BOARD (VJB00C40)
MECHANISM CONNECTION C. BOARD (VJB00D08)
TO CHASSIS EARTH
SAFETY TAB SW
PHOTO COUPLER
IC1501 ON2160
P1518
GND
D1501 LN59
Q1503 PN150NV
CASSETTE SW1
CASSETTE SW2
P1510
C1503
F. LOADING MOTOR
C1502
Q1502 PN150NV
P1511
P1517
P1512
DEW SENSOR
TO CHASSIS GND
P1541
P1516
C1504
P1514
TO FG HEAD
LOADING MOTOR
P1513
TO MODE SW
TO CAPSTAN MOTOR
P1515
S3001 ESD32211
J4002 MIC (R-CH)
J4001 MIC (L-CH)
IC4001 TA7325P
IC6001 μPD4503BC
IC6002 MN15342VGL
IC6003 AN6914
IC6004 BA6238A
IC2004 BA236
P4004
P6005
P6002
P6004
P6003
X6001
TO TIMER P7509-1
TO TIMER P7509-2
TO SUB SERVO P2203-7
TO SUB SERVO P2202-3
TO SUB SERVO P2203-8
TP GND
TP6001
TP6002
TP2008
TP2012
D1006
VR2009
VR2010
LP/SLP TRACKING
SP TRACKING
P2002

P4002 (TO FM AUDIO)

1	REG 12V
2	GND
3	LINE Ⓗ
4	MUTE LEVEL
5	AUDIO IN (NORMAL)
6	ENV. OUT
7	A.H. SW
8	FILTER IN Ⓛ
9	D. REC 12V
10	REC 5V
11	MUTE Ⓗ
12	E.E Ⓗ
13	SLP Ⓗ
14	CURR EMPH
15	AUDIO OUT (NORMAL)
16	REC MUTE Ⓛ
17	REC 5V
18	REC MUTE Ⓗ

P4001 (TO A/C HEAD)

1	A. HEAD (W)
2	A. HEAD (R)
3	A.E HEAD
4	GND
5	CTL HEAD

P4004 (TO FM AUDIO)

1	MIC IN Ⓗ
2	MIC OUT (R-CH)
3	GND
4	MIC OUT (L-CH)

P6005 (TO OPERATION)

1	P21
2	P22
3	P03
4	P23
5	P02
6	SERIAL DATA
7	SERIAL CLOCK

P6002 (TO TIMER)

1	P02
2	P23
3	KEY SCAN
4	P03
5	P21

P6004 (TO FRONT LOADING)

1	F. LOADING Ⓜ ⊕
2	F. LOADING Ⓜ ⊖
3	GND
4	CASSETTE SW 2
5	CASSETTE SW 1
6	SUPPLY PHOTO
7	TAKE-UP PHOTO

P6003 (TO TIMER)

1	TUNER Ⓛ
2	GND
3	POWERE SW ON Ⓛ
4	SERIAL CLOCK
5	SERIAL DATA
6	POWER ON Ⓛ
7	REG 12.7V
8	SYSTEM CTL BACK UP

P2002 (TO OPERATION)

1	SLOW TRACKING VR ⊖
2	SLOW TRACKING VR ⊕
3	TRACKING VR
4	PICTURE CTL
5	EXCEPT REC 5V
6	GND
7	REG 12V
8	REG 5V

(TO TIMER)

3T	VTR Ⓗ
3R	SAFETY TAB
30	D. REC

1	SAFETY TAB
2	REEL PULSE
3	PHOTO COUPLER +B
4	SNS LED GND
5	SNS LED

P1518

1	SAFETY TAB
2	——

P1510

1	FRONT LOADING Ⓜ ⊕
2	FRONT LOADING Ⓜ ⊖
3	GND
4	CASSETTE SW2
5	CASSETTE SW1
6	SUPPLY PHOTO Tr
7	TAKEUP PHOTO Tr

P1512

1	UNREG +12V
2	PLUNGER ON Ⓛ

P1511

1	SAFETY TAB
2	REEL PULSE
3	PHOTO COUPLER +B
4	SNS LED GND
5	SNS LED

P1516

1	S3
2	S2
3	S1

P1513

1	VH −
2	H2 +
3	H2 −
4	M1
5	H1 +
6	VH +
7	H1 −
8	H3 +
9	H3 −
10	M3
11	M2

P1517

1	S1	2	S2
3	S3	4	PHOTO COUPLER +B
5	SNS LED ⊕	6	SNS LED GND
7	REEL PULSE	8	SAFETY TAB
9	LOAD ⊕	10	LOAD ⊖
11	DEW	12	M2
13	M3	14	H3−
15	H3+	16	H1−
17	VH+	18	H1+
19	M1	20	H2−
21	H2+	22	VH−
23	+B	24	FG 1
25	PLUNGER ON Ⓛ	26	MOTOR REG
27	FG 2	28	GND

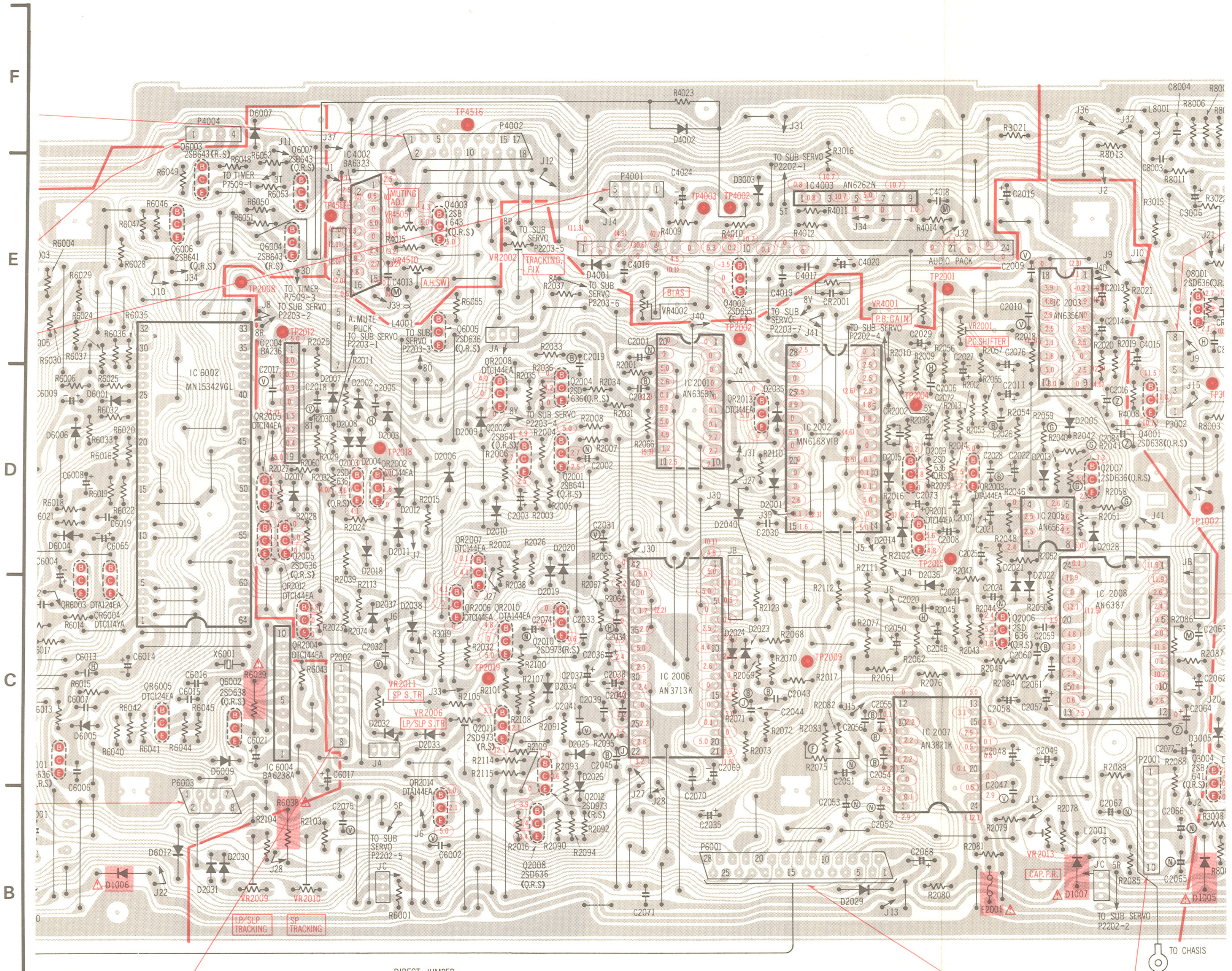
P1514

1	FG 2
2	GND
3	FG 1
4	+B

P1515

1	LOADING Ⓜ ⊕
2	LOADING Ⓜ ⊖

3-10. SERVO Section in Main Circuit Board (VEP03276A1)


F
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D
C
B
A
7
8
9
10
11
12
IC 6002
MN15342VGL
IC 6004
BA6238A
IC4002
BA6323
IC4003 AN6262N
IC2001
AN6359N
IC 2002
MN6168VIB
IC 2003
AN6356N
IC 2005
AN6562
IC 2006
AN3713K
IC 2007
AN3821K
IC 2008
AN6387
TP4516
TP4003
TP4002
TP2001
TP2002
TP2004
TP2008
TP2009
TP2012
TP2015
TP2018
TP2019
TP1002
VR2001
VR2002
VR2006
VR2009
VR2010
VR2011
VR2013
VR4001
VR4510
MUTING ADJ
TRACKING F/A
BIAS
P.B. GAIN
PG SHIFTER
A.H.SW
SP S. TR
LP/SLP S. TR
LP/SLP TRACKING
SP TRACKING
CAP F.R.
AUDIO PACK
TO TIMER P7509-1
TO TIMER P7505-3
TO SUB SERVO P2203-2
TO SUB SERVO P2202-1
TO SUB SERVO P2202-2
TO SUB SERVO P2202-5
TO SUB SERVO P2203-5
TO SUB SERVO P2203-6
TO SUB SERVO P2203-7
A. MUTE PUCK
P4004
P4001
P4002
P6003
P6001
P2001
P2002
F2001
D1005
D1006
D1007
X6001
L4001
L6001
TO CHASIS

P2002 (TO OPERATION)

1	SLOW TRACKING VR ⊖
2	SLOW TRACKING VR ⊕
3	TRACKING VR
4	PICTURE CTL
5	EXCEPT REC 5V
6	GND
7	REG 12V
8	REG 5V

DIRECT JUMPER

(TO TIMER)

3T	VTR Ⓗ
3R	SAFETY TAB
30	D. REC

(TO SUB SERVO)

5T	SLP Ⓗ
5R	REG 5V
50	SYSTEM CTL 5V
5Y	VSS BRANCH
5P	LP SLOW TRACKING

(TO SUB SERVO)

8T	MM. CR
8R	MM. IN
80	CAP × 4
8Y	SW SP/LP/SLP
8P	E.E Ⓗ
8A	VSY 2
8V	H. SW
8N	LP/SLP Ⓗ

P6001 (TO MECHANISM CONNECTION)

1	GND	15	H_3
2	FG 2	16	M_3
3	MOTOR REG	17	M_2
4	PLUNGER ON Ⓛ	18	DEW
5	FG 1	19	LOADING Ⓜ⊖
6	+B	20	LOADING Ⓜ⊕
7	VH−	21	SAFETY TAB
8	H_2^+	22	REEL PULSE
9	H_2^-	23	SENSOR LED GND
10	M_1	24	SENSOR LED ⊕
11	H_1^+	25	PHOTO +B
12	VH+	26	S_3
13	H_1^-	27	S_2
14	H_3^+	28	S_1

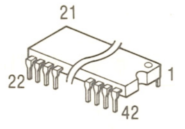
P2001 (TO CYL MOTOR)

1	M_2
2	VH^+
3	HES
4	M_3
5	HEM
6	GND
7	M. COM
8	$\overline{HEM}$
9	$\overline{HES}$
10	M_1

SERVO CIRCUIT BOARD	
Transistor	
Q2001	D-9
Q2002	D-9
Q2003	D-8
Q2004	D-9
Q2005	D-8
Q2006	C-11
Q2007	D-12
Q2008	B-9
Q2009	D-11
Q2010	C-9
Q2011	C-9
Q2012	C-9
Transistor & Resistor	
QR2002	D-8
QR2003	D-11
QR2004	C-8
QR2005	D-8
QR2006	C-9
QR2007	D-9
QR2008	D-9
QR2010	C-9
QR2011	D-11
QR2012	D-8
QR2013	D-10
QR2014	B-9
Integrated Circuit	
IC2001	D-10
IC2002	D-10
IC2003	E-12
IC2004	D-8
IC2005	D-11
IC2006	C-10
IC2007	C-11
IC2008	C-12
Test Point	
TP2001	E-11
TP2002	E-10
TP2004	E-11
TP2008	E-8
TP2009	C-10
TP2012	E-8
TP2015	D-11
TP2018	D-8
TP2019	C-9
Adjustment	
VR2001	E-11
VR2002	E-9
VR2006	C-9
VR2009	B-8
VR2010	B-8
VR2011	C-8
VR2013	C-11

ADDRESS INFORMATION

ICs & TRANSISTORs INFORMATION



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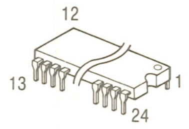
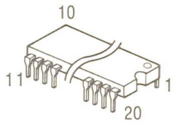


AN3821K
AN6387



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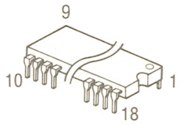

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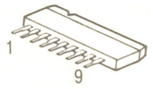
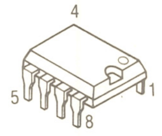


BA236B



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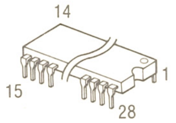
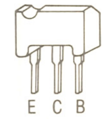
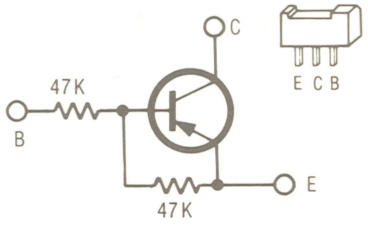


MN6168VIB



2SB641
2SD636
2SD973


47K
B
C
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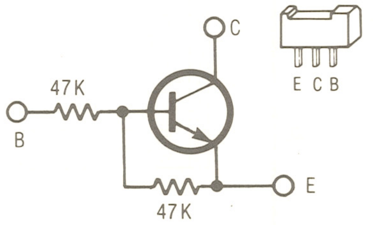
47K
E C B

DTA144EA


47K
B
C
E
47K
E C B

DTC144EA

Back Page:
SYSTEM CONTROL Section

SERVO ICs VOLTAGE CHART

MODE \ REF. NO.		IC2001																			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
SP	PLAY	0	0	0	0	0	0.1	0.1	2.7	2.7	2.7	2.5	1.2	4.9	5.0	5.0	0.1	2.6	5.0	0	0
	REC	0	0	0	0	0	0.1	0.1	2.7	2.7	2.7	2.5	5.3	4.9	5.0	5.1	2.3	2.6	5.0	0	0
LP	PLAY	0	0	0.1	0	0	0.2	3.9	2.7	2.7	2.7	2.5	1.2	2.8	5.0	5.0	0.2	2.6	5.0	2.7	0
	REC	0.1	0	0.1	0	0	0.2	3.9	2.7	2.7	2.7	2.5	5.3	2.9	5.0	5.0	2.3	2.6	5.0	2.7	0
SLP	PLAY	0	0	0.1	0	0	4.0	3.9	2.7	2.7	2.7	2.5	1.4	0.1	5.0	5.0	0.2	2.6	5.0	2.7	0
	REC	0.1	0	0.1	0	0	4.0	3.9	2.7	2.7	2.7	2.5	5.3	0.1	5.0	5.0	2.3	2.6	5.0	2.7	0

MODE \ REF. NO.		IC2002																			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
SP	PLAY	0	2.5	2.5	2.3	4.8	1.8	0	0	0.1	0.1	0.1	5.0	0	5.0	1.6	0.1	2.6	0	0	0
	REC	0	2.5	2.5	2.6	4.8	1.8	4.6	0	5.5	0.1	0.1	5.0	0	5.0	1.6	2.3	2.6	0	0	0
LP	PLAY	0	2.5	2.5	1.7	4.8	1.8	0	0	0.1	0.2	3.9	5.0	0	5.0	1.6	0.2	2.6	0	0	0.1
	REC	0	2.5	2.5	1.9	4.8	1.8	4.5	0	5.5	0.2	3.9	5.0	0	5.0	1.6	2.3	2.6	0.1	0.1	0.1
SLP	PLAY	0	2.5	2.5	2.3	4.8	1.8	0	0	0.1	4.0	3.9	5.0	0	5.0	1.6	0.2	2.6	0	0	0.1
	REC	0	2.5	2.5	2.6	4.8	1.8	4.5	0	5.5	4.0	3.9	5.0	0	5.0	1.6	2.3	2.6	0.1	0.1	0.1

MODE \ REF. NO.		IC2002							
		21	22	23	24	25	26	27	28
SP	PLAY	0	5.0	0	3.9	2.5	0	2.6	2.5
	REC	0	5.0	0	3.9	2.5	0	2.6	2.5
LP	PLAY	0	5.0	0	3.9	2.5	0	2.6	2.5
	REC	0	5.0	0	3.9	2.5	0	2.6	2.5
SLP	PLAY	0	5.0	0	3.9	2.5	0	2.6	2.5
	REC	0	5.0	0	3.9	2.5	0	2.6	2.5

MODE \ REF. NO.		IC2003																	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
SP	PLAY	0.1	−0.2	1.9	0	2.5	2.5	0	2.5	0	3.0	5.0	1.8	1.1	2.5	2.9	4.8	3.9	0
	REC	2.3	−0.4	2.5	0	2.5	2.6	0	2.8	4.6	3.0	5.0	1.8	1.3	2.5	2.9	4.8	3.9	0
LP	PLAY	0.2	−0.2	1.9	0	2.5	2.5	0	2.5	0	3.0	5.0	1.8	1.1	2.5	2.9	4.8	3.9	0
	REC	0	−0.4	2.5	0	2.5	2.6	0	2.8	4.5	3.0	5.0	1.8	1.1	2.5	3.0	4.8	3.9	0
SLP	PLAY	0.2	0	1.9	0	2.5	2.5	0	2.5	0	3.0	5.0	1.8	1.1	2.5	2.9	4.8	3.9	0
	REC	2.3	−0.4	2.5	0	2.5	2.6	0	2.8	4.5	3.0	5.0	1.8	1.1	2.5	2.9	4.8	3.9	0

MODE \ REF. NO.		IC2004										IC2005							
		1	2	3	4	5	6	7	8	9		1	2	3	4	5	6	7	8
SP	PLAY	5.0	3.0	0.7	0.3	0	1.5	0.2	0.4	5.0		2.4	2.5	2.5	0	2.6	2.6	2.5	5.0
	REC	5.0	3.0	0.7	0.3	0	1.7	0.2	0.4	5.0		2.4	2.5	2.5	0	2.6	2.6	2.5	5.0
LP	PLAY	5.0	3.0	0.7	1.0	0	1.7	0.5	1.6	5.0		2.4	2.5	2.5	0	2.6	2.6	2.5	5.0
	REC	5.0	3.0	0.7	1.0	0	1.7	0.5	1.6	5.0		2.4	2.5	2.5	0	2.6	2.6	2.5	5.0
SLP	PLAY	5.0	3.0	0.7	1.6	0	2.8	0.2	0.4	5.0		2.4	2.5	2.5	0	2.6	2.6	2.5	5.0
	REC	5.0	3.0	0.7	1.6	0	3.0	0.2	0.4	5.0		2.4	2.5	2.5	0	2.6	2.6	2.5	5.0

MODE \ REF. NO.		IC2006																			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
SP	PLAY	4.8	5.0	0.1	5.0	0.5	0	0.1	2.5	2.9	4.4	2.4	2.6	0	0	2.6	0	3.0	0.1	0	5.0
	REC	0.1	5.0	0.1	5.0	0.5	0	0.1	2.6	2.9	4.5	2.4	2.6	0	0	2.6	0	3.0	0.1	−0.1	5.0
LP	PLAY	4.8	5.0	0.1	5.0	0.5	0	4.0	2.6	2.9	4.4	2.4	2.6	0	0	2.6	0	3.0	0.1	5.0	−0.1
	REC	0.1	5.0	0.2	5.0	0.6	0	3.6	2.6	2.9	4.6	2.4	2.6	0	0	2.6	0	3.0	0.1	5.0	0
SLP	PLAY	4.8	5.0	0.2	5.0	0.5	0	0.1	2.6	2.9	4.4	2.4	2.6	0	0	2.6	0	3.0	0.1	3.0	0
	REC	0.1	5.0	0.2	5.0	0.6	0	3.5	2.5	2.9	4.4	2.4	2.6	0	0	2.6	0	2.9	0.1	5.0	0

MODE \ REF. NO.		IC2006																			
		21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
SP	PLAY	1.9	3.2	2.8	2.5	2.2	2.2	0	2.5	2.4	3.1	2.5	2.4	5.0	2.5	2.0	0	1.2	0	0	2.2
	REC	1.6	3.2	2.8	2.5	2.2	2.3	0	2.6	2.4	3.2	2.5	2.4	5.0	2.5	2.0	0	2.2	0	0	2.3
LP	PLAY	1.0	3.2	2.8	2.5	2.2	2.2	0	2.6	2.4	3.2	2.5	2.4	5.0	2.5	2.0	0	1.3	0	0	2.3
	REC	1.8	3.2	2.8	2.5	2.2	2.3	0	2.6	2.4	3.2	2.5	2.4	5.0	2.5	2.0	0	2.2	0	0.1	2.3
SLP	PLAY	1.8	2.4	2.5	2.5	2.2	2.2	0	2.5	2.4	3.1	2.5	2.4	5.0	2.5	2.0	0	1.3	0	0	2.3
	REC	1.5	2.4	2.5	2.5	2.2	2.3	0	2.5	2.4	3.1	2.5	2.4	5.0	2.5	2.0	0	2.2	0	0.1	2.3

MODE \ REF. NO.		IC2006	
		41	42
SP	PLAY	5.0	0
	REC	5.0	0.1
LP	PLAY	5.0	3.8
	REC	5.0	3.9
SLP	PLAY	5.0	3.9
	REC	5.0	3.9

REF. NO.		IC2007																			
MODE		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
SP	PLAY	2.9	0.1	2.9	0	2.2	2.2	2.2	2.2	2.2	2.2	0.1	0	5.0	3.1	2.6	2.5	0.1	0.5	0.8	0.1
	REC	2.9	0.1	2.9	0	2.2	2.2	2.2	2.2	2.2	2.2	0	0	5.1	3.1	2.7	2.5	0.1	0.5	0.8	0.1
LP	PLAY	2.5	0.1	2.5	0	2.2	2.2	2.2	2.2	2.3	2.3	0.2	0	5.0	3.1	2.7	2.5	0.1	0.5	0.8	0.1
	REC	2.5	0.1	2.5	0	2.2	2.2	2.2	2.2	2.3	2.3	0	0	5.1	3.1	2.7	2.5	0.1	0.5	0.8	0.1
SLP	PLAY	2.4	0.1	2.4	0	2.2	2.2	2.2	2.2	2.3	2.3	0.2	0	5.0	3.1	2.7	2.5	0.1	0.5	0.8	0.1
	REC	2.4	0.1	2.4	0	2.2	2.2	2.2	2.2	2.3	2.3	0	0	5.0	3.1	2.7	2.5	0.1	2.5	0.8	0.1

REF. NO.		IC2007																			
MODE		21	22	23	24																
SP	PLAY	0	0.5	2.9	12.1																
	REC	0	0.5	2.9	12.1																
LP	PLAY	0	0.5	2.5	12.1																
	REC	0	0.5	2.5	12.1																
SLP	PLAY	0	0.5	2.4	12.1																
	REC	0	0.5	2.4	12.1																

REF. NO.		IC2008																			
MODE		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
SP	PLAY	11.9	11.9	2.6	2.4	0.1	2.0	11.8	0.1	10.7	0.8	2.6	0	2.5	0.6	0.6	1.8	1.8	3.0	4.8	3.9
	REC	11.8	11.8	2.6	2.4	0.1	2.0	11.8	0.1	10.7	0.9	2.6	0	2.5	0.6	0.6	1.8	1.8	3.0	4.8	3.9
LP	PLAY	11.9	11.9	2.6	2.4	0.1	2.0	11.8	0.1	10.7	0.8	2.6	0	2.5	0.6	0.6	1.8	1.8	3.0	4.8	3.9
	REC	11.9	11.9	2.6	2.4	0.1	2.0	11.8	0.1	10.7	0.8	2.6	0	2.5	0.6	0.6	1.8	1.8	3.0	4.8	3.9
SLP	PLAY	12.0	11.9	2.6	2.4	0.1	2.0	11.8	0.1	10.7	0.8	2.6	0	2.5	0.6	0.6	1.8	1.8	3.0	4.8	3.9
	REC	11.9	11.9	2.6	2.4	0.1	2.0	11.8	0.1	10.7	0.8	2.6	0	2.5	0.6	0.6	1.8	1.8	3.0	4.8	3.9

REF. NO.		IC2008																			
MODE		21	22	23	24																
SP	PLAY	12.1	0	11.9	0.1																
	REC	11.9	0	11.9	0.1																
LP	PLAY	12.1	0	11.9	0.1																
	REC	12.1	0	11.9	0.1																
SLP	PLAY	12.1	0	11.9	0.1																
	REC	12.1	0	11.9	0.1																

SERVO TRANSISTORs VOLTAGE CHART

REF. NO.		Q2001			Q2002			Q2003			Q2004			Q2005			Q2006		
MODE		E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
SP	PLAY	2.5	2.7	5.0	2.5	2.7	4.9	4.1	3.6	0	0	4.2	0	0	5.0	0	1.8	5.0	2.4
	REC	2.5	2.7	5.0	2.5	2.7	4.9	4.1	4.0	0	0	4.2	0	0	5.0	0	1.8	5.0	2.4
LP	PLAY	2.5	2.7	5.0	2.5	2.7	5.0	4.1	2.9	0	0	4.2	0	0	5.0	0	1.8	5.0	2.4
	REC	2.5	2.7	5.0	2.5	2.7	5.0	4.1	3.4	0	0	4.2	0	0	5.0	0	1.8	5.0	2.4
SLP	PLAY	2.5	2.7	5.0	2.5	2.7	5.0	0	4.7	0	0	4.2	0	0	5.0	0	1.8	5.0	2.4
	REC	2.5	2.7	5.0	2.5	2.7	5.0	0	5.1	0	0	4.2	0	0	5.0	0	1.8	5.0	2.4

REF. NO.		Q2007			Q2008			Q2009			Q2010			Q2011			Q2012		
MODE		E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
SP	PLAY	2.7	5.0	3.3	3.4	3.4	3.9	0	4.8	0.2	0.6	12.1	0	12.1	12.1	3.1	0	0.6	0
	REC	2.7	5.0	3.3	3.4	3.4	3.9	0	4.8	0.2	0.7	12.1	0	12.1	12.1	3.1	0	0.7	0
LP	PLAY	2.7	5.0	3.3	3.4	3.4	3.9	0	4.8	0.2	0.6	12.1	0	12.1	12.1	3.1	0	0.6	0
	REC	2.7	5.0	3.3	3.4	3.4	3.9	0	4.8	0.2	0.7	12.1	0	12.1	12.1	3.1	0	0.7	0
SLP	PLAY	2.7	5.0	3.3	1.0	2.4	0	0	4.8	0.2	0.6	12.1	0	12.1	12.1	3.1	0	0.6	0
	REC	2.7	5.0	3.3	1.0	2.4	0	0	4.8	0.2	0.7	12.1	0	12.1	12.1	3.1	0	0.7	0

REF. NO.		QR2002			QR2003			QR2004			QR2005			QR2006			QR2007		
MODE		E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
SP	PLAY	0	1.8	0.1	2.7	2.5	5.0	0	0	4.8	0	0	0	0	0	4.1	0	4.1	0.1
	REC	0	1.0	0.1	2.7	2.5	5.0	0	0	4.8	0	0	0	0	0	4.1	0	4.1	0.1
LP	PLAY	0	1.3	0.1	2.7	2.6	5.0	0	0	5.0	0	0	0	0	0	4.1	0	4.1	0.2
	REC	0	1.8	0.1	2.7	2.6	5.0	0	0	5.0	0	0	0.1	0	0	4.1	0	4.1	0.2
SLP	PLAY	0	1.2	0.1	2.7	2.6	5.0	0	0	5.0	0	0	0	0	1.9	0	0	0	4.0
	REC	0	1.3	0.1	2.7	2.6	5.0	0	0	5.0	0	0	0.1	0	1.9	0	0	0	4.0

REF. NO.		QR2008			QR2010			QR2011			QR2012			QR2013			QR2014		
MODE		E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
SP	PLAY	0	0	4.0	5.0	0	4.8	4.8	5.6	2.6	0	2.9	0	0	5.0	0	5.0	−2.1	5.0
	REC	0	0	4.0	5.0	0	4.8	0	5.5	0.3	0	2.9	0	0	5.0	0	5.0	−2.0	5.0
LP	PLAY	0	0	4.0	5.0	0	5.0	4.8	6.4	2.6	0	2.9	0	0	5.0	0	5.0	−1.6	5.0
	REC	0	0	4.0	5.0	0	5.0	0.1	5.4	0.3	0	2.9	0.1	0	5.0	0	5.0	−2.0	5.0
SLP	PLAY	0	0	4.0	5.0	0	5.0	4.8	5.3	2.6	0	2.9	0.1	0	5.0	0	5.0	−2.0	5.0
	REC	0	0	4.0	5.0	0	5.0	0.1	5.4	0.3	0	2.9	0.1	0	5.0	0	5.0	−1.8	5.0

SERVO SCHEMATIC	
Transistor	
Q2001	G-5
Q2002	G-5
Q2003	B-7
Q2004	B-4
Q2005	A-6
Q2006	G-7
Q2007	F-6
Q2008	D-7
Q2009	C-12
Q2010	G-9
Q2011	F-9
Q2012	G-9
Transistor & Resistor	
QR2002	F-5
QR2003	D-4
QR2004	A-7
QR2005	B-6
QR2006	A-4
QR2007	A-5
QR2008	B-5
QR2010	G-9
QR2011	A-13
QR2012	G-6
QR2013	E-3
QR2014	D-1
Integrated Circuit	
IC2001	F-2
IC2002	D-3
IC2003	E-7
IC2004	B-3
IC2005	F-8
IC2006	B-7
IC2007	G-10
IC2008	E-10
Test Point	
TP2001	C-3
TP2002	D-7
TP2004	D-4
TP2008	G-2
TP2009	A-13
TP2012	B-3
TP2015	G-8
TP2018	C-6
TP2019	F-8
Adjustment	
VR2001	E-8
VR2002	E-8
VR2006	B-12
VR2009	B-12
VR2010	B-12
VR2011	B-12
VR2013	G-12
Connector	
P2001	D-14
P2002	E-14
P6001	F-14

ADDRESS INFORMATION

3-11. SERVO SCHEMATIC DIAGRAM

CYLINDER SERVO SPEED LOOP

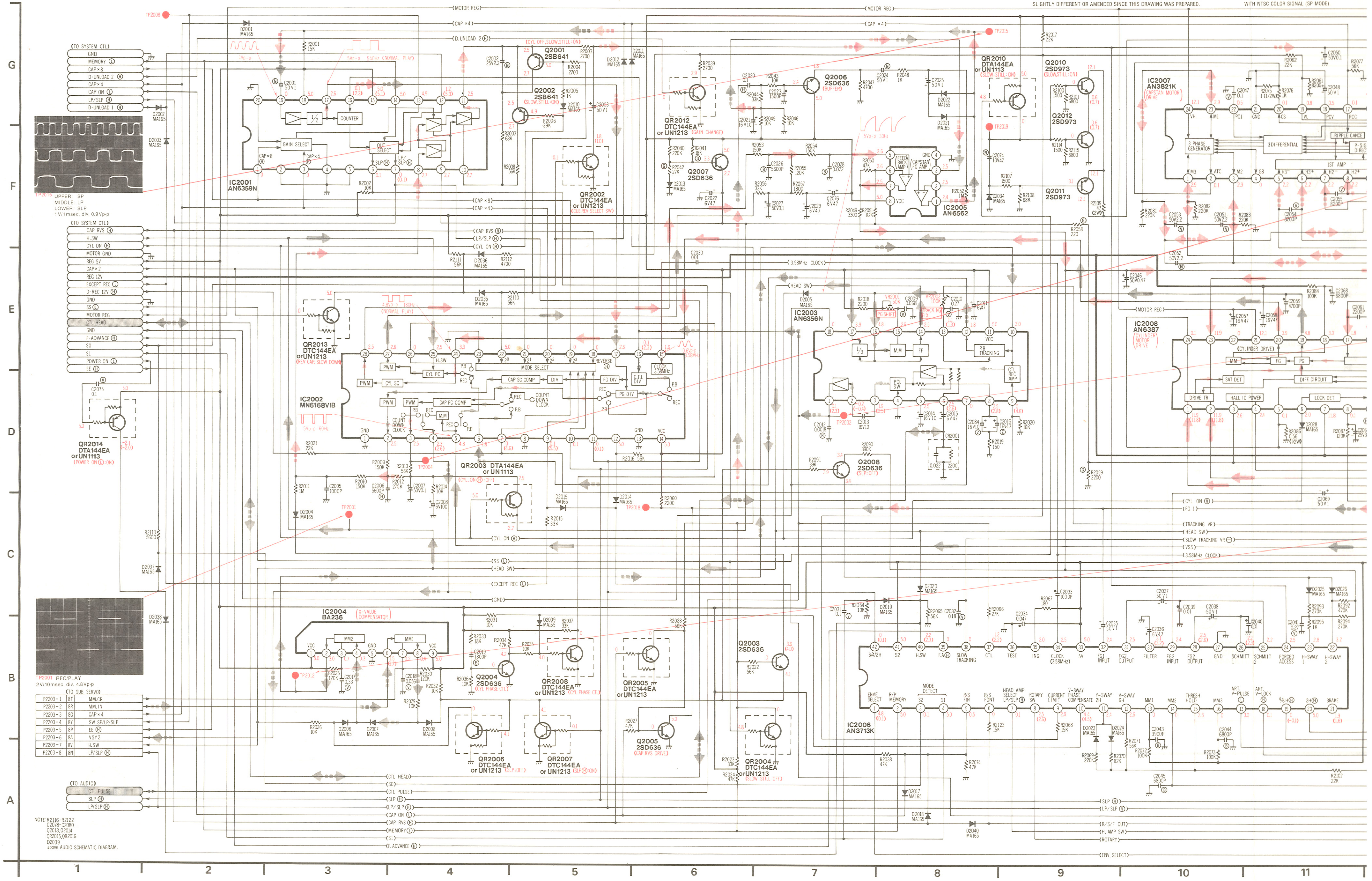
CYLINDER SERVO PHASE LOOP

CAPSTAN SERVO SPEED LOOP

CAPSTAN SERVO PHASE LOOP

NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE
WITH NTSC COLOR SIGNAL (SP MODE).
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF
WITH NTSC COLOR SIGNAL (SP MODE).


G
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
10
11
TP2008
TP2015
UPPER: SP
MIDDLE: LP
LOWER: SLP
1V/1msec. div. 0.9Vp-p
(TO SYSTEM CTL)
GND
MEMORY
CAP×8
D-UNLOAD 2
CAP×4
CAP ON
LP/SLP
D-UNLOAD 1
(MOTOR REG)
(CAP×4)
IC2001
AN6359N
COUNTER
GAIN SELECT
OUT SELECT
Q2001
2SB641
Q2002
2SB641
QR2002
DTC144EA
or UN1213
QR2012
DTC144EA
or UN1213
Q2007
2SD636
Q2006
2SD636
IC2005
AN6562
QR2010
DTA144EA
or UN1113
Q2010
2SD973
Q2012
2SD973
Q2011
2SD973
IC2007
AN3821K
3 PHASE GENERATOR
3 DIFFERENTIAL
(TO SYSTEM CTL)
CAP RVS
H.SW
CYL ON
MOTOR GND
REG 5V
CAP×2
REG 12V
EXCEPT REC
D-REC 12V
GND
SS
MOTOR REG
CTL HEAD
GND
F-ADVANCE
S0
S1
POWER ON
EE
QR2013
DTC144EA
or UN1213
IC2002
MN6168VIB
MODE SELECT
CAP SC COMP
CAP PC COMP
COUNT DOWN CLOCK
CLOCK 3.58MHz
QR2003 DTA144EA
or UN1113
QR2014
DTA144EA
or UN1113
IC2003
AN6356N
P.B TRACKING
Q2008
2SD636
IC2008
AN6387
CYLINDER DRIVE
DRIVE TR
HALL IC POWER
LOCK DET
(3.58MHz CLOCK)
(HEAD SW)
TP2001 REC/PLAY
2V/10msec. div. 4.8Vp-p
(TO SUB SERVO)
P2203-1 MM.CR
P2203-2 MM.IN
P2203-3 CAP×4
P2203-4 SW SP/LP/SLP
P2203-5 EE
P2203-6 VSYZ
P2203-7 H.SW
P2203-8 LP/SLP
IC2004
BA236
Q2004
2SD636
QR2008
DTC144EA
or UN1213
QR2005
DTC144EA
or UN1213
QR2006
DTC144EA
or UN1213
QR2007
DTC144EA
or UN1213
Q2005
2SD636
Q2003
2SD636
QR2004
DTC144EA
or UN1213
IC2006
AN3713K
(TO AUDIO)
CTL PULSE
SLP
LP/SLP
(CTL HEAD)
(CTL PULSE)
(CAP ON)
(CAP RVS)
(MEMORY)
(F. ADVANCE)
(ENV. SELECT)
(ROTARY)
NOTE: R2116~R2122
C2078~C2080
Q2013,Q2014
QR2015,QR2016
D2039
above AUDIO SCHEMATIC DIAGRAM.

CYLINDER SERVO SPEED LOOP

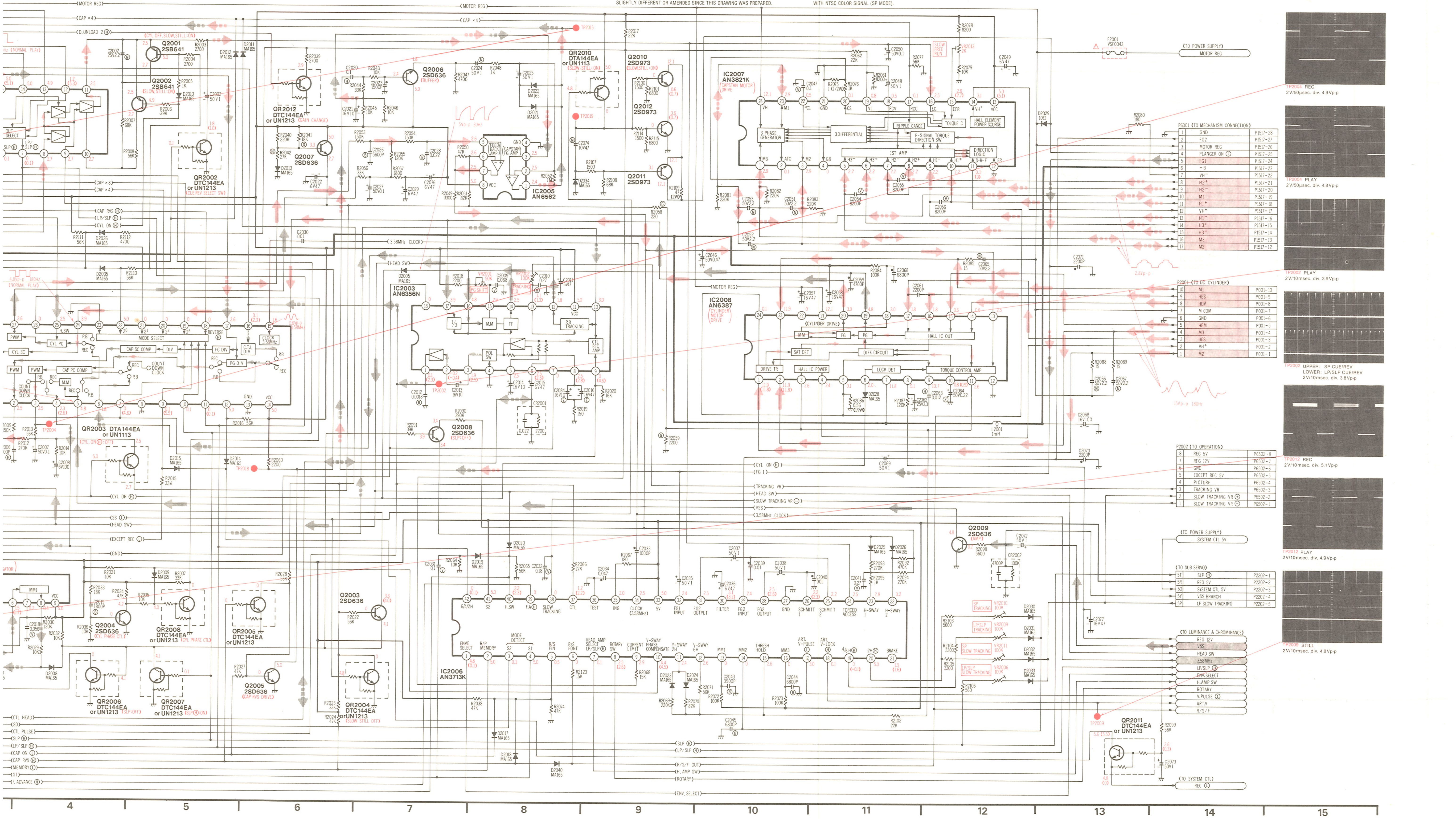
CYLINDER SERVO PHASE LOOP

CAPSTAN SERVO SPEED LOOP

CAPSTAN SERVO PHASE LOOP

NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS RECORD MODE WITH NTSC COLOR SIGNAL (SP MODE).
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH NTSC COLOR SIGNAL (SP MODE).


IC2003 AN6356N
IC2005 AN6562
IC2006 AN3713K
IC2007 AN3821K (CAPSTAN MOTOR DRIVE)
IC2008 AN6387 (CYLINDER MOTOR DRIVE)
Q2001 2SB641
Q2002 2SB641 (SLOW, STILL ON)
QR2002 DTC144EA or UN1213 (CUE REV SELECT SW)
QR2012 DTC144EA or UN1213 (GAIN CHANGE)
Q2006 2SD636 (BUFFER)
Q2007 2SD636
QR2010 DTA144EA or UN1113 (SLOW, STILL ON)
Q2010 2SD973 (SLOW, STILL ON)
Q2012 2SD973
Q2011 2SD973
QR2003 DTA144EA or UN1113 (CYL ON OFF)
Q2008 2SD636 (SLP OFF)
Q2009 2SD636 (AMP)
Q2003 2SD636
Q2004 2SD636 (CYL PHASE CTL)
QR2008 DTC144EA or UN1213 (CYL PHASE CTL)
QR2005 DTC144EA or UN1213
Q2005 2SD636 (CAP RVS DRIVE)
QR2004 DTC144EA or UN1213 (SLOW, STILL OFF)
QR2006 DTC144EA or UN1213 (SLP OFF)
QR2007 DTC144EA or UN1213 (SLP ON)
QR2011 DTC144EA or UN1213
F2001 VSF0043
(TO POWER SUPPLY) MOTOR REG
P6001 (TO MECHANISM CONNECTION)
P2001 (TO DD CYLINDER)
P2002 (TO OPERATION)
(TO POWER SUPPLY) SYSTEM CTL 5V
(TO SUB SERVO)
(TO LUMINANCE & CHROMINANCE)
(TO SYSTEM CTL) REC
TP2004 REC
2V/50μsec. div. 4.9Vp-p
TP2004 PLAY
2V/50μsec. div. 4.8Vp-p
TP2002 PLAY
2V/10msec. div. 3.9Vp-p
TP2002 UPPER: SP CUE/REV
LOWER: LP/SLP CUE/REV
2V/10msec. div. 3.8Vp-p
TP2012 REC
2V/10msec. div. 5.1Vp-p
TP2012 PLAY
2V/10msec. div. 4.9Vp-p
TP2009 STILL
2V/10msec. div. 4.8Vp-p
4
5
6
7
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9
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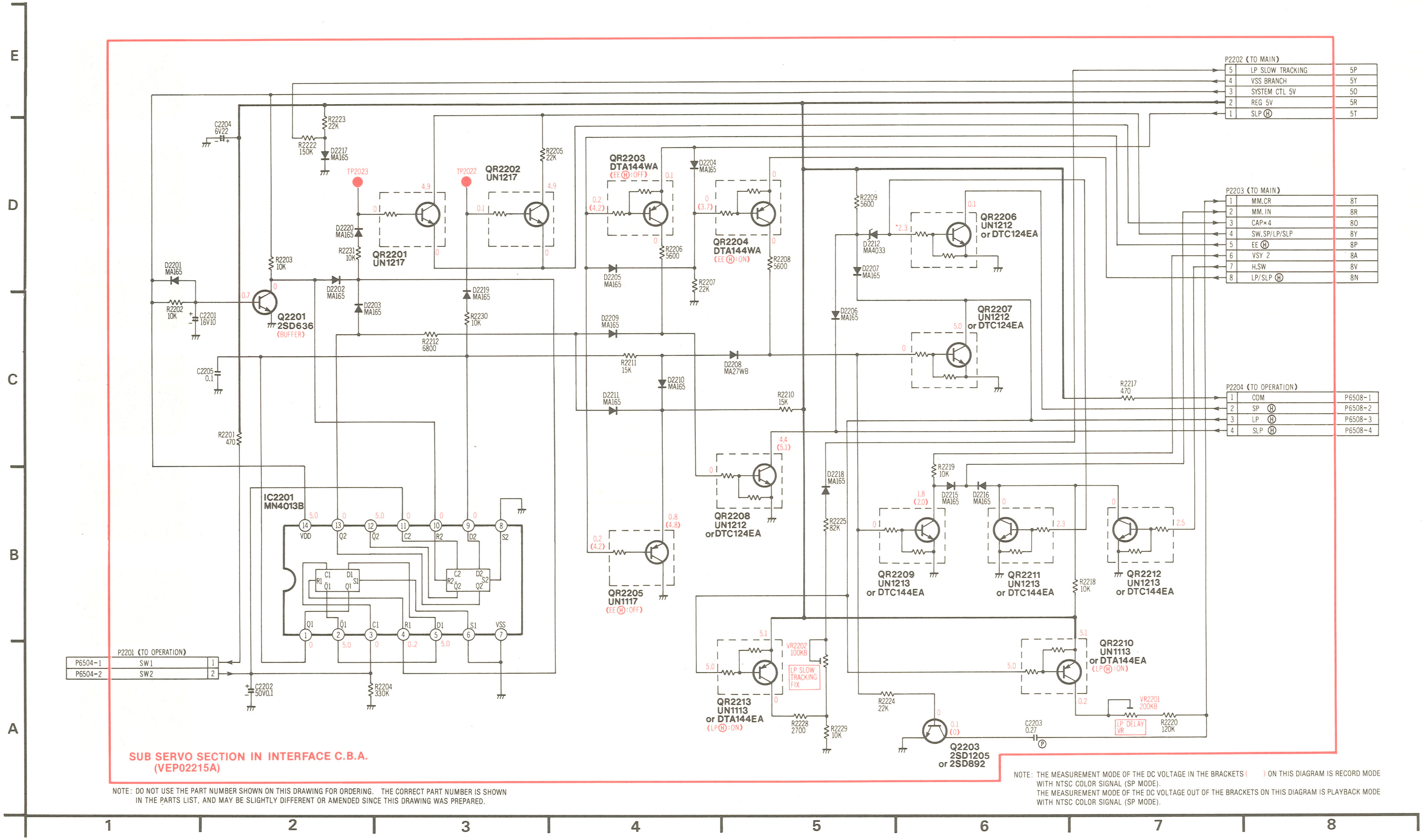
11
12
13
14
15

Next Page:
SERVO Section

3-12. SUB SERVO SCHEMATIC DIAGRAM

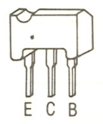

E
D
C
B
A
1
2
3
4
5
6
7
8
P2202 (TO MAIN)
5 LP SLOW TRACKING 5P
4 VSS BRANCH 5Y
3 SYSTEM CTL 5V 50
2 REG 5V 5R
1 SLP Ⓗ 5T
P2203 (TO MAIN)
1 MM.CR 8T
2 MM.IN 8R
3 CAP×4 80
4 SW.SP/LP/SLP 8Y
5 EE Ⓗ 8P
6 VSY 2 8A
7 H.SW 8V
8 LP/SLP Ⓗ 8N
P2204 (TO OPERATION)
1 COM P6508-1
2 SP Ⓗ P6508-2
3 LP Ⓗ P6508-3
4 SLP Ⓗ P6508-4
P2201 (TO OPERATION)
P6504-1 SW1 1
P6504-2 SW2 2
IC2201 MN4013B
VDD
VSS
Q2201 2SD636 (BUFFER)
QR2201 UN1217
QR2202 UN1217
QR2203 DTA144WA (EE Ⓗ:OFF)
QR2204 DTA144WA (EE Ⓗ:ON)
QR2205 UN1117 (EE Ⓗ:OFF)
QR2206 UN1212 or DTC124EA
QR2207 UN1212 or DTC124EA
QR2208 UN1212 or DTC124EA
QR2209 UN1213 or DTC144EA
QR2210 UN1113 or DTA144EA (LP Ⓗ:ON)
QR2211 UN1213 or DTC144EA
QR2212 UN1213 or DTC144EA
QR2213 UN1113 or DTA144EA (LP Ⓗ:ON)
Q2203 2SD1205 or 2SD892
TP2023
TP2022
VR2202 100KB
LP SLOW TRACKING FIX
VR2201 200KB
LP DELAY VR
C2203 0.27
R2220 120K
SUB SERVO SECTION IN INTERFACE C.B.A. (VEP02215A)

NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

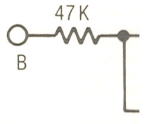
NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS RECORD MODE WITH NTSC COLOR SIGNAL (SP MODE).
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH NTSC COLOR SIGNAL (SP MODE).

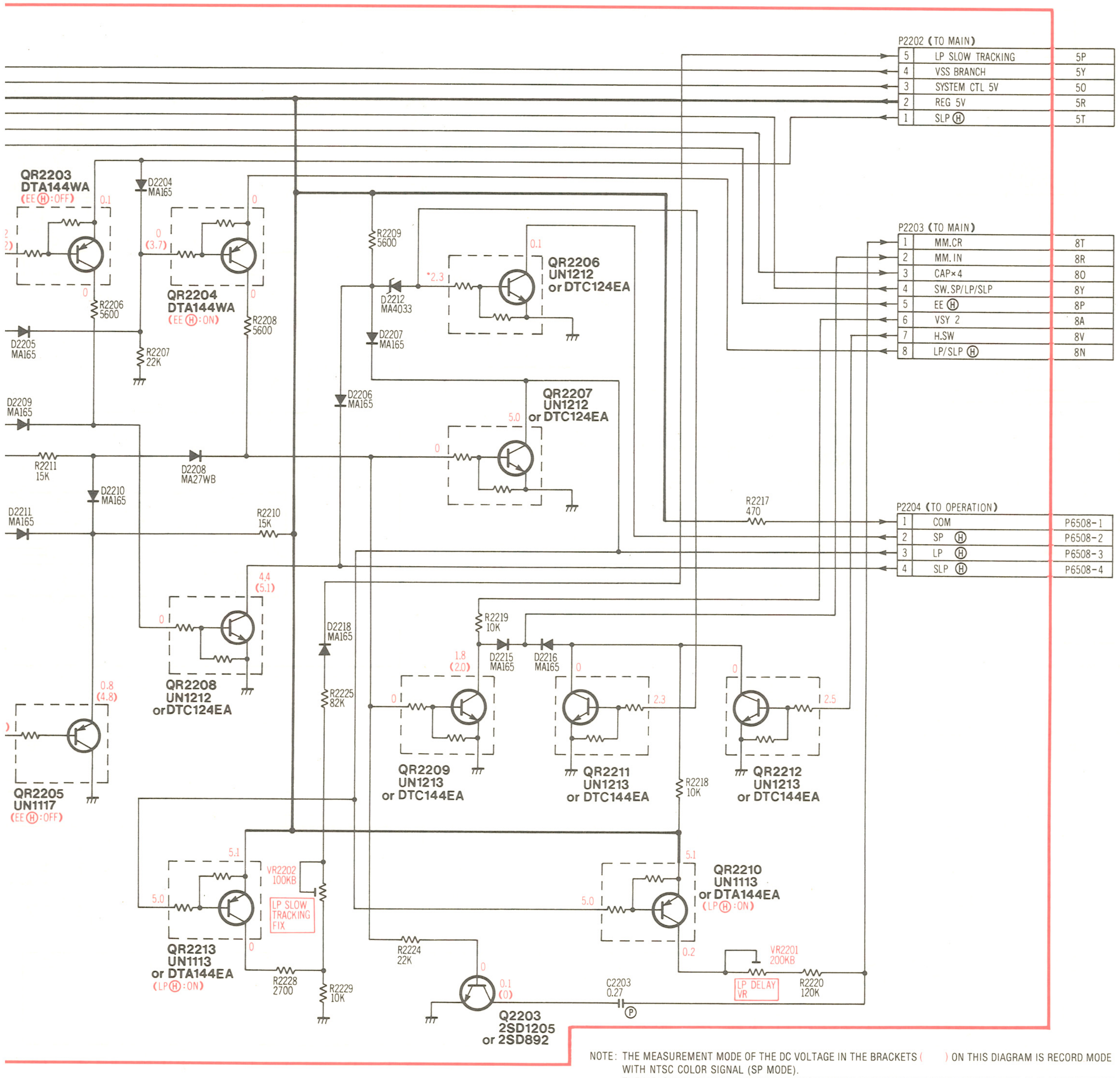
SUB SERVO SECTION IN INTERFACE SCHEMATIC	
Transistor	
Q2201	C-2
Q2203	A-6
Transistor & Resistor	
QR2201	D-3
QR2202	D-3
QR2203	D-4
QR2204	D-5
QR2205	B-4
QR2206	D-6
QR2207	C-6
QR2208	B-5
QR2209	B-6
QR2210	A-7
QR2211	B-6
QR2212	B-7
QR2213	A-5
Integrated Circuit	
IC2201	B-2
Test Point	
TP2018	D-3
TP2019	D-2
Adjustment	
VR2201	A-7
VR2202	A-5
Connector	
P2201	A-1
P2202	E-8
P2203	D-8
P2204	C-8

ADDRESS INFORMATION



2SD636
2SD1205




P2202 (TO MAIN)
5 LP SLOW TRACKING 5P
4 VSS BRANCH 5Y
3 SYSTEM CTL 5V 50
2 REG 5V 5R
1 SLP Ⓗ 5T
P2203 (TO MAIN)
1 MM.CR 8T
2 MM.IN 8R
3 CAP×4 80
4 SW.SP/LP/SLP 8Y
5 EE Ⓗ 8P
6 VSY 2 8A
7 H.SW 8V
8 LP/SLP Ⓗ 8N
P2204 (TO OPERATION)
1 COM P6508-1
2 SP Ⓗ P6508-2
3 LP Ⓗ P6508-3
4 SLP Ⓗ P6508-4
QR2203 DTA144WA (EE Ⓗ:OFF)
D2204 MA165
R2206 5600
R2207 22K
QR2204 DTA144WA (EE Ⓗ:ON)
R2208 5600
D2205 MA165
D2209 MA165
R2211 15K
D2208 MA27WB
D2210 MA165
D2211 MA165
R2210 15K
R2209 5600
D2212 MA4033
D2207 MA165
D2206 MA165
QR2206 UN1212 or DTC124EA
QR2207 UN1212 or DTC124EA
R2217 470
QR2208 UN1212 or DTC124EA
QR2205 UN1117 (EE Ⓗ:OFF)
D2218 MA165
R2225 82K
R2219 10K
D2215 MA165
D2216 MA165
QR2209 UN1213 or DTC144EA
QR2211 UN1213 or DTC144EA
QR2212 UN1213 or DTC144EA
R2218 10K
QR2213 UN1113 or DTA144EA (LP Ⓗ:ON)
VR2202 100KB
LP SLOW TRACKING FIX
R2228 2700
R2229 10K
R2224 22K
QR2210 UN1113 or DTA144EA (LP Ⓗ:ON)
VR2201 200KB
LP DELAY VR
R2220 120K
C2203 0.27
Ⓟ
Q2203 2SD1205 or 2SD892
4
5
6
7
8

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS RECORD MODE WITH NTSC COLOR SIGNAL (SP MODE).
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH NTSC COLOR SIGNAL (SP MODE).

SUB SERVO SECTION IN INTERFACE SCHEMATIC	
Transistor	
Q2201	C-2
Q2203	A-6
Transistor & Resistor	
QR2201	D-3
QR2202	D-3
QR2203	D-4
QR2204	D-5
QR2205	B-4
QR2206	D-6
QR2207	C-6
QR2208	B-5
QR2209	B-6
QR2210	A-7
QR2211	B-6
QR2212	B-7
QR2213	A-5
Integrated Circuit	
IC2201	B-2
Test Point	
TP2018	D-3
TP2019	D-2
Adjustment	
VR2201	A-7
VR2202	A-5
Connector	
P2201	A-1
P2202	E-8
P2203	D-8
P2204	C-8

ADDRESS INFORMATION

SUB SERVO SECTION IN INTERFACE TRANSISTORs VOLTAGE CHART

MODE \ REF. NO.		Q2201			Q2203		
		E	C	B	E	C	B
SP	PLAY	0	0	0.7	0	0.1	0
	REC	0	0	0.7	0	0	0
LP	PLAY	0	0	0.7	0	0	0.6
	REC	0	0	0.7	0	0	0.6
SLP	PLAY	0	0	0.7	0	0	0
	REC	0	0	0.7	0	0.1	0

MODE \ REF. NO.		QR2201			QR2202			QR2203			QR2204			QR2205			QR2206		
		E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
SP	PLAY	0	4.9	0	0	4.9	0.1	0.1	0	0.2	0	0	0	0.8	0	0.2	0	0.1	2.3
	REC	0	4.9	0	0	4.9	0.1	0.1	0	4.2	0	0	3.7	4.8	0	4.2	0	0.1	2.3
LP	PLAY	0.1	2.8	0.1	0.1	0.1	3.1	0.1	0	0.2	3.8	3.8	1.1	0.8	0	0.2	0	2.0	0
	REC	0,1	2.9	0	0.1	0.1	3.1	0.2	0	4.3	3.8	1.8	3.7	4.8	0	4.3	0	2.5	0
SLP	PLAY	0.1	0.1	2.7	0.1	0.1	0.1	4.0	4.0	0.2	3.9	0	3.5	0.9	0	0.2	0	2.9	0
	REC	0.1	0.1	2.8	0.1	0.1	0.1	4.0	3.5	4.3	3.9	0	3.8	4.8	0	4.3	0	2.2	0

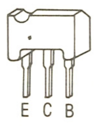
MODE \ REF. NO.		QR2207			QR2208			QR2209			QR2210			QR2211			QR2212		
		E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
SP	PLAY	0	5.0	0	0	4.4	0	0	1.8	0	5.1	0.2	5.0	0	0	2.3	0	0	2.5
	REC	0	5.0	0	0	5.1	0	0	2.0	0	5.1	0.2	5.0	0	0	2.3	0	0	2.5
LP	PLAY	0	0.1	2.5	0	1.9	0	0	0	2.5	5.0	5.0	0.1	0	1.9	0	0	1.9	2.5
	REC	0	0.2	1.8	0	3.1	0	0	0	1.8	5.0	5.0	0.2	0	1.9	0	0	1.9	2.5
SLP	PLAY	0	5.0	0	0	0.1	3.3	0	1.9	0	5.0	0.2	5.0	0	1.9	0	0	1.9	2.5
	REC	0	5.0	0	0	0.1	3.5	0	2.1	0	5.0	0.2	5.0	0	1.9	0	0	1.9	2.5

MODE \ REF. NO.		QR2213		
		E	C	B
SP	PLAY	5.1	0	5.0
	REC	5.1	0	5.0
LP	PLAY	5.0	5.0	0.1
	REC	5.0	5.0	0.2
SLP	PLAY	5.0	0	5.0
	REC	5.0	0	5.0

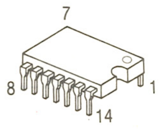
SUB SERVO SECTION IN INTERFACE IC VOLTAGE CHART

MODE \ REF. NO.		IC2201													
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
SP	PLAY	0	5.0	0	0.2	5.0	0	0	0	0	0	0	5.0	0	5.0
	REC	0	5.0	0	0.2	5.0	0	0	0	0	0	0	5.0	0	5.0
LP	PLAY	4.9	0	0	0.2	0	0	0	0	4.9	0	0	5.0	0	5.0
	REC	4.9	0	0	0.2	0	0	0	0	4.9	0	0	5.0	0	5.0
SLP	PLAY	0	5.0	0	4.3	5.0	0	0	0	0	0	0	0	4.8	5.0
	REC	0	0	0	4.4	5.0	0	0	0	0	0	0	0	4.9	5.0

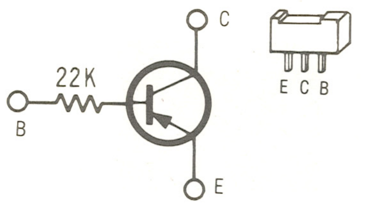
ICs & TRANSISTORs INFORMATION



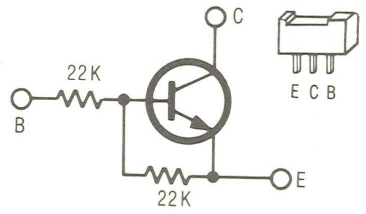
2SD636
2SD1205



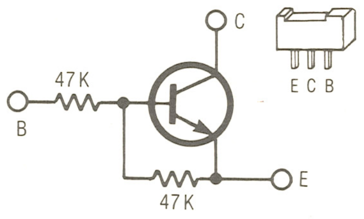
MN4013B



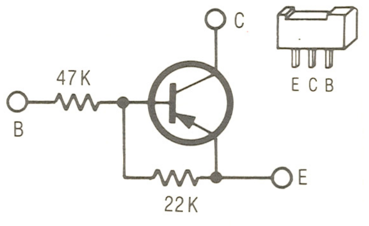
UN1117


22K
B
C
E
22K
E C B

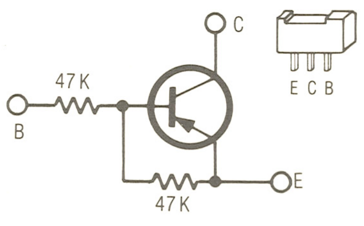
DTC124EA


47K
B
C
E
47K
E C B

DTC144EA


47K
B
C
E
22K
E C B

DTA144WA


47K
B
C
E
47K
E C B

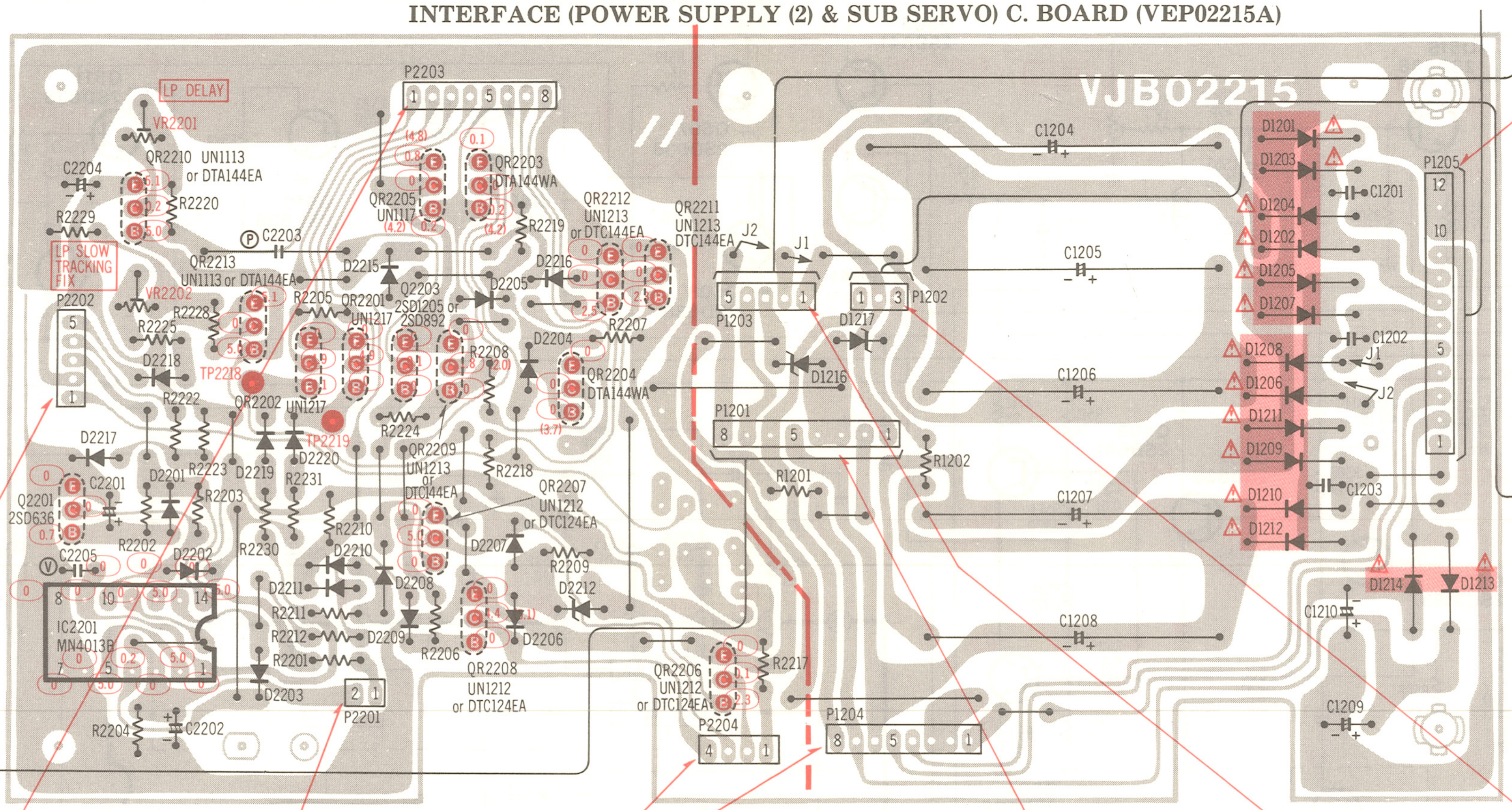
DTA144EA

3-13. SUB SERVO Section in Interface Circuit Board (VEP02215A)

SUB SERVO SECTION IN INTERFACE CIRCUIT BOARD	
Transistor	
Q2201	B-14
Q2203	B-15
Transistor & Resistor	
QR2201	B-15
QR2202	B-15
QR2203	C-16
QR2204	B-16
QR2205	C-15
QR2206	B-16
QR2207	B-15
QR2208	B-16
QR2209	B-15
QR2210	C-15
QR2211	C-16
QR2212	C-16
QR2213	C-15
Integrated Circuit	
IC2201	B-14
Test Point	
TP2018	B-15
TP2019	B-15
Adjustment	
VR2201	C-15
VR2202	C-15

ADDRESS INFORMATION

INTERFACE (POWER SUPPLY (2) & SUB SERVO) C. BOARD (VEP02215A)

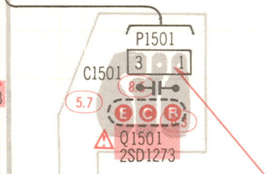


C
B
A
14
15
16
17
18
19
VJB02215
P2203
LP DELAY
VR2201
QR2210 UN1113 or DTA144EA
C2204
R2220
R2229
LP SLOW TRACKING FIX
P2202
C2203
QR2213 UN1113 or DTA144EA
VR2202
R2228
R2225
D2218
TP2218
R2222
QR2202 UN1217
TP2219
D2217
D2220
C2201
D2201
R2223
D2219
R2203
R2231
Q2201 2SD636
C2205
R2202
D2202
R2230
IC2201 MN4013B
D2211
R2211
R2212
R2201
D2209
D2203
R2204
C2202
P2201
QR2205 UN1117
QR2203 DTA144WA
QR2212 UN1213 or DTC144EA
QR2211 UN1213 DTC144EA
R2219
D2215
R2205
QR2201 UN1217
Q2203 2SD1205 or 2SD892
D2205
D2216
R2207
D2204
R2208
QR2204 DTA144WA
R2224
QR2209 UN1213 or DTC144EA
R2218
QR2207 UN1212 or DTC124EA
R2210
D2210
D2207
R2209
D2208
D2212
R2206
D2206
QR2208 UN1212 or DTC124EA
QR2206 UN1212 or DTC124EA
R2217
P2204
P1204
J2
J1
P1203
D1216
D1217
P1202
P1201
R1201
R1202
C1204
C1205
C1206
C1207
C1208
C1209
C1210
C1201
C1202
C1203
D1201
D1203
D1204
D1202
D1205
D1207
D1208
D1206
D1211
D1209
D1210
D1212
D1214
D1213
P1205

P1205 (TO POWER TRANSFORMER)

1	AC 15V
2	AC 38V
3	AC 6V
4	AC 6V
5	AC 14V
6	AC 14V
7	AC 9V
8	AC 9V
9	AC 15V
10	GND
11	GND
12	GND

CYLINDER HEATER C. BOARD (VJB00E36)



P1501
C1501
5.7
Q1501 2SD1273

P2202 (TO MAIN-DIRECT JUMPER)

1	SLP Ⓗ
2	+5V
3	SYSTEM CTL 5V
4	VSS BRANCH
5	LP SLOW TRACKING

P1501

1	REG 6V Ⓔ
2	UNREG 10V Ⓒ
3	Ⓑ

P2203 (TO MAIN-DIRECT JUMPER)

1	MM. CR
2	MM IN
3	CAP ×4
4	SW SP/LP/SLP
5	E.E Ⓗ
6	VSY 2
7	H. SW
8	LP/SLP Ⓗ

P2201 (TO OPERATION)

1	SW 1
2	SW 2

P2204 (TO OPEARTION)

1	COM
2	SP
3	LP
4	SLP

P1204 (TO TIMER)

1	UNREG 45V
2	GND
3	GND
4	AC 6V
5	AC 6V
6	UNREG 17V
7	UNREG 45V
8	REG 6V

P1201 (TO MAIN)

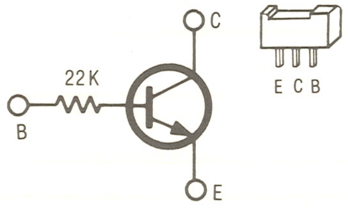
1	UNREG 10V
2	UNREG 45V
3	GND
4	GND
5	UNREG 17V
6	REG 6V
7	MOTOR REG
8	MOTOR GND

P1203 (TO POWER Tr(1))

1	Ⓒ
2	AC 14V Ⓜ
3	Ⓑ
4	Ⓔ
5	AC 14V Ⓜ

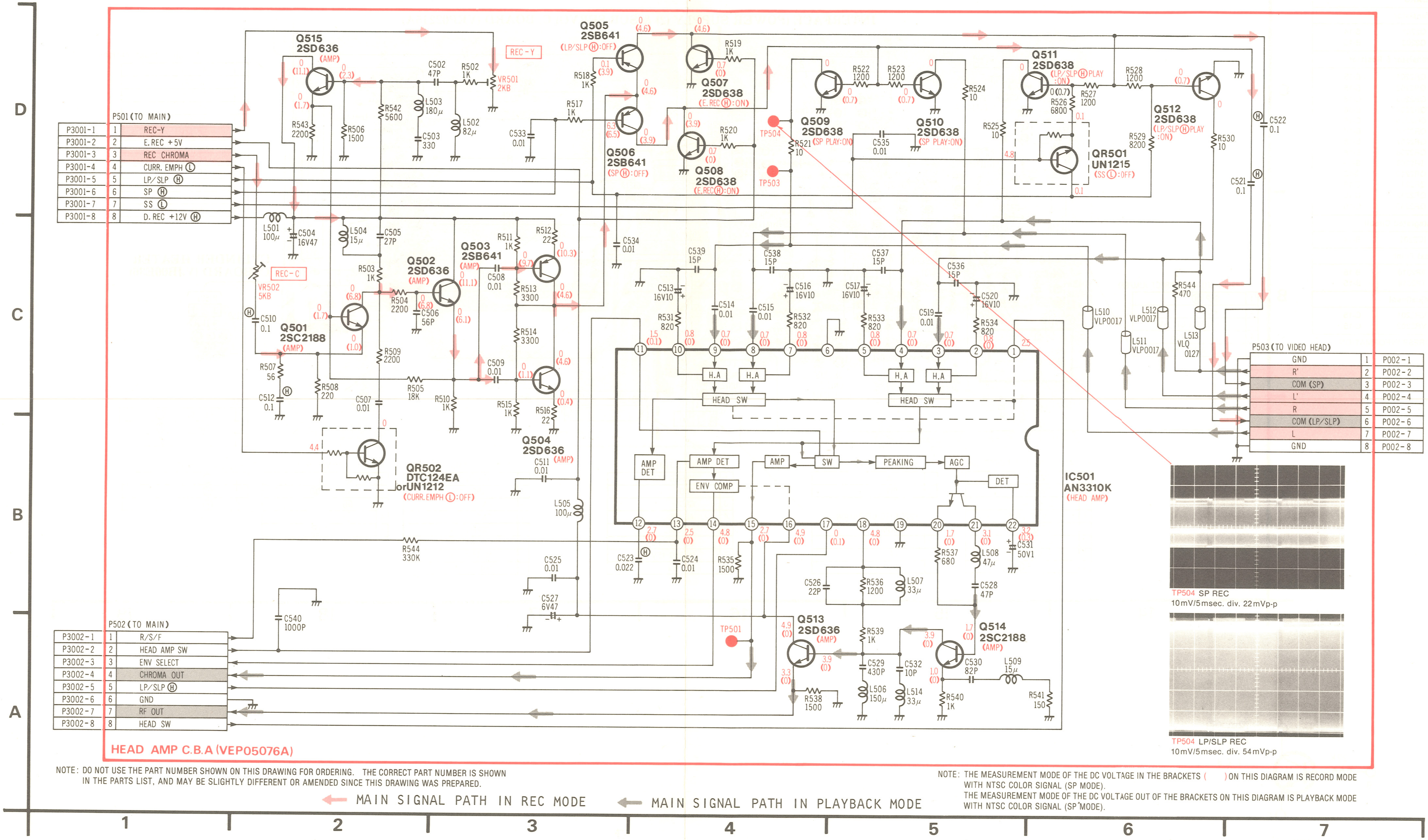
P1202 (CYL HEATER)

1	Ⓔ
2	Ⓒ
3	Ⓑ



UN1217

3-14. HEAD AMP SCHEMATIC DIAGRAM



D
C
B
A
1
2
3
4
5
6
7
P501 (TO MAIN)
P3001-1 1 REC-Y
P3001-2 2 E. REC +5V
P3001-3 3 REC CHROMA
P3001-4 4 CURR. EMPH Ⓛ
P3001-5 5 LP/SLP Ⓗ
P3001-6 6 SP Ⓗ
P3001-7 7 SS Ⓛ
P3001-8 8 D. REC +12V Ⓗ
P502 (TO MAIN)
P3002-1 1 R/S/F
P3002-2 2 HEAD AMP SW
P3002-3 3 ENV SELECT
P3002-4 4 CHROMA OUT
P3002-5 5 LP/SLP Ⓗ
P3002-6 6 GND
P3002-7 7 RF OUT
P3002-8 8 HEAD SW
P503 (TO VIDEO HEAD)
1 GND P002-1
2 R' P002-2
3 COM (SP) P002-3
4 L' P002-4
5 R P002-5
6 COM (LP/SLP) P002-6
7 L P002-7
8 GND P002-8
Q515 2SD636 (AMP)
Q505 2SB641 (LP/SLP Ⓗ:OFF)
Q506 2SB641 (SP Ⓗ:OFF)
Q507 2SD638 (E.REC Ⓗ:ON)
Q508 2SD638 (E.REC Ⓗ:ON)
Q509 2SD638 (SP PLAY:ON)
Q510 2SD638 (SP PLAY:ON)
Q511 2SD638 (LP/SLP Ⓗ PLAY:ON)
Q512 2SD638 (LP/SLP Ⓗ PLAY:ON)
QR501 UN1215 (SS Ⓛ:OFF)
Q502 2SD636 (AMP)
Q503 2SB641 (AMP)
Q501 2SC2188 (AMP)
Q504 2SD636 (AMP)
QR502 DTC124EA or UN1212 (CURR. EMPH Ⓛ:OFF)
Q513 2SD636 (AMP)
Q514 2SC2188 (AMP)
IC501 AN3310K (HEAD AMP)
H.A
HEAD SW
AMP DET
AMP DET
AMP
SW
PEAKING
AGC
ENV COMP
DET
REC-Y
REC-C
VR501 2KB
VR502 5KB
TP501
TP503
TP504
HEAD AMP C.B.A (VEP05076A)

TP504 SP REC
10mV/5msec. div. 22mVp-p

TP504 LP/SLP REC
10mV/5msec. div. 54mVp-p

NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS RECORD MODE WITH NTSC COLOR SIGNAL (SP MODE).
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH NTSC COLOR SIGNAL (SP MODE).

← MAIN SIGNAL PATH IN REC MODE ← MAIN SIGNAL PATH IN PLAYBACK MODE

Back Page:
SUB SERVO Section

HEAD AMP SCHEMATIC	
Transistor	
Q501	C-2
Q502	C-3
Q503	C-3
Q504	B-3
Q505	D-3
Q506	D-3
Q507	D-4
Q508	D-4
Q509	D-5
Q510	D-5
Q511	D-6
Q512	D-6
Q513	A-4
Q514	A-5
Q515	D-2
Transistor & Resistor	
QR501	D-6
QR502	B-2
Integrated Circuit	
IC501	B-6
Test Point	
TP501	A-4
TP503	D-4
TP504	D-4
Adjustment	
VR501	D-3
VR502	C-2
Connector	
P501	D-1
P502	A-1
P503	C-7

ADDRESS INFORMATION

HEAD AMP TRANSISTORs VOLTAGE CHART

REF. NO. / MODE		Q501			Q502			Q503			Q504			Q505			Q506		
		E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
SP	PLAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0	0	6.3
	REC	1.0	6.8	1.7	6.1	11.1	6.8	10.3	4.6	9.7	0.4	4.6	1.1	4.6	4.6	3.9	4.6	3.9	6.5
LP	PLAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8.5	0	0	0
	REC	1.0	6.8	1.7	6.1	11.1	6.8	10.4	0.1	9.7	0.4	4.8	1.1	4.8	0.7	8.5	4.8	5.1	4.4
SLP	PLAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8.4	0	0	0
	REC	1.0	6.8	1.7	6.1	11.0	6.7	10.4	4.8	9.7	0.4	4.8	1.1	4.8	0.7	8.5	4.8	5.1	4.3
REF. NO. / MODE		Q507			Q508			Q509			Q510			Q511			Q512		
		E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
SP	PLAY	0	0	0.7	0	0	0.7	0	0	0	0	0	0	0	0	0	0	0	0
	REC	0	4.6	0	0	3.9	0	0	0	0.7	0	0	0.7	0	0	0.7	0	0	0.7
LP	PLAY	0	0	0.7	0	0	0.7	0	0.2	0	0	0.4	0	0	0	0.6	0	0	0.7
	REC	0	0.7	0	0	5.1	0.1	0	0	0.7	0	0	0.7	0	0	0.7	0	0	0.7
SLP	PLAY	0	0	0.7	0	0	0.7	0	0	0	0	0	0	0	0	0.6	0	0	0.7
	REC	0	0.7	0	0	5.1	0.1	0	0	0.7	0	0	0.7	0	0	0.7	0	0	0.7
REF. NO. / MODE		Q513			Q514			Q515											
		E	C	B	E	C	B	E	C	B									
SP	PLAY	3.3	4.9	3.9	1.0	3.9	1.7	0	0	0									
	REC	0	0	0	0	0	0	1.7	11.1	2.3									
LP	PLAY	3.3	4.8	3.9	1.0	3.9	1.7	0	0	0									
	REC	0	0	0	0	0	0	1.7	11.1	2.3									
SLP	PLAY	3.3	4.8	3.9	1.0	3.9	1.7	0	0	0									
	REC	0	0	0.1	0	0.1	0	1.7	11.0	2.3									
REF. NO. / MODE		QR501			QR502														
		E	C	B	E	C	B												
SP	PLAY	0.1	0.1	4.8	0	0	4.4												
	REC	0.1	0.1	4.8	0	0	4.4												
LP	PLAY	4.3	8.5	5.0	0	0	4.4												
	REC	4.3	8.5	5.0	0	0	4.4												
SLP	PLAY	4.3	8.5	5.0	0	0	4.4												
	REC	4.3	8.5	5.0	0	0	4.4												

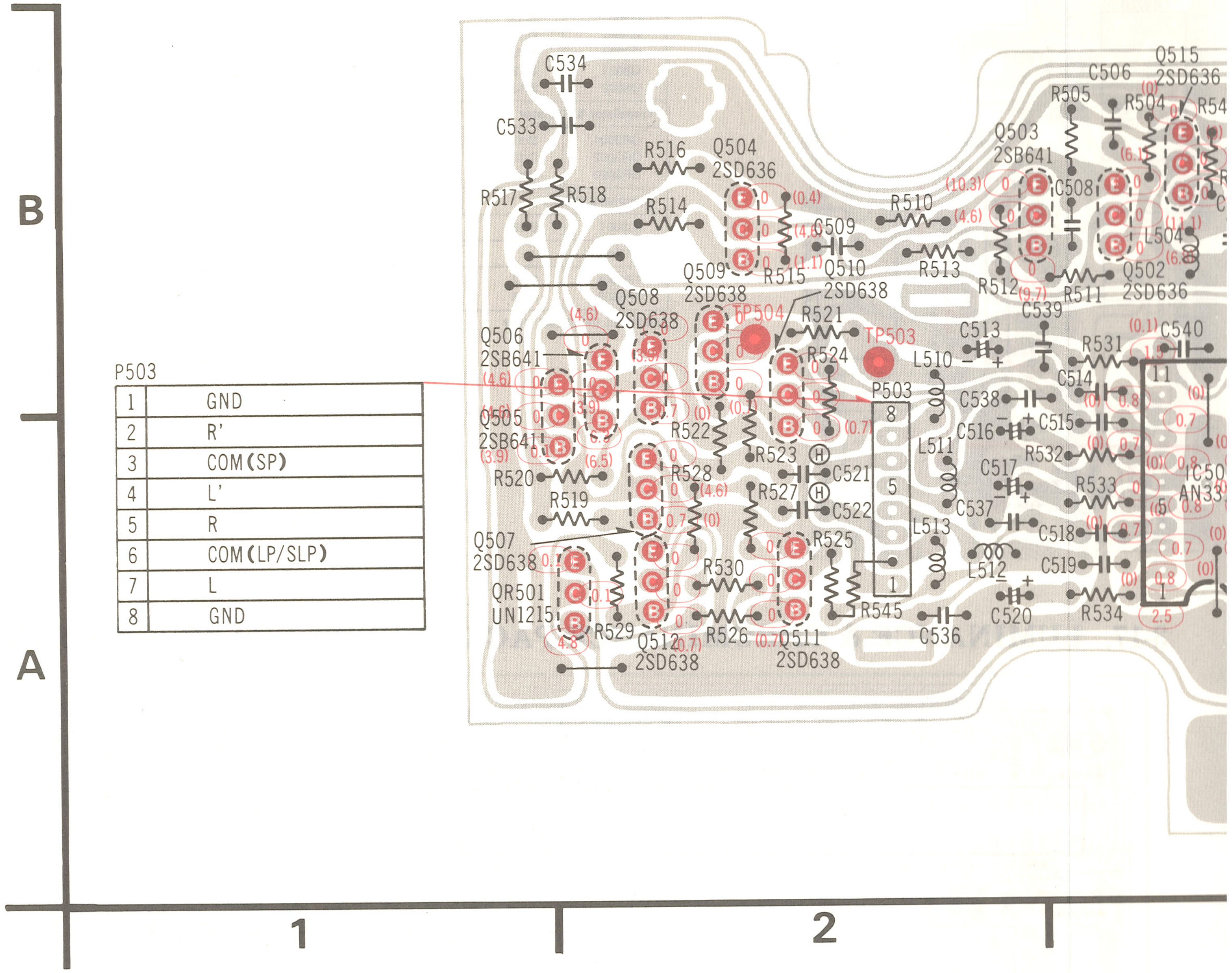
HEAD AMP CIRCUIT BOARD	
Transistor	
Q501	B-3
Q502	B-3
Q503	B-2
Q504	B-2
Q505	A-2
Q506	B-2
Q507	A-2
Q508	B-2
Q509	B-2
Q510	A-2
Q511	A-2
Q512	A-2
Q513	A-4
Q514	A-3
Q515	B-3
Transistor & Resistor	
QR501	A-2
QR502	B-3
Integrated Circuit	
IC501	A-3
Test Point	
TP501	A-4
TP503	B-2
TP504	B-2
Adjustment	
VR501	B-4
VR502	B-4

ADDRESS INFORMATION

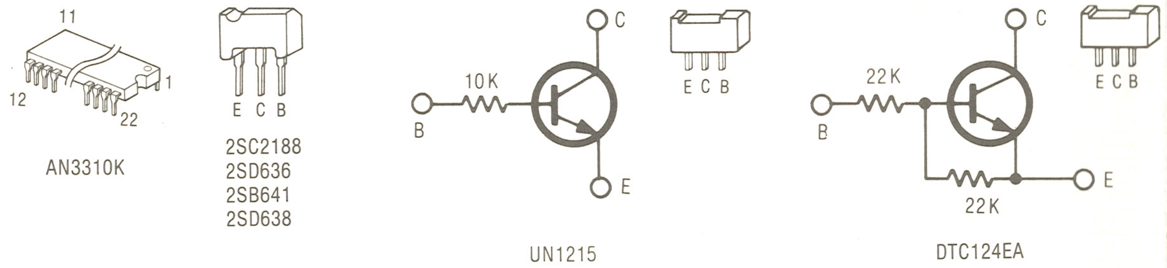
HEAD AMP IC VOLTAGE CHART

REF. NO. / MODE		IC501																			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
SP	PLAY	2.5	0.8	0.7	0.7	0.8	0	0.8	0.7	0.7	0.8	1.5	2.7	2.5	4.8	2.7	4.9	0	4.8	0	1.7
	REC	2.5	0	0	0	0	0	0	0	0	0	0.1	0	0	0	0	0	0.1	0	0	0
LP	PLAY	2.5	0.8	0.7	0.7	0.8	0	0.8	0.7	0.7	0.8	4.0	2.8	2.5	4.8	2.8	4.8	3.8	4.8	0	1.7
	REC	2.5	0	0	0	0	0	0	0	0	0	3.5	0	0	0.1	0	0.1	3.8	0.1	0	0
SLP	PLAY	2.5	0.8	0.7	0.7	0.8	0	0.8	0.7	0.7	0.8	4.0	0.4	2.5	4.8	2.8	4.8	3.8	4.8	0	1.7
	REC	2.5	0	0	0	0	0	0	0	0	0	3.5	0	0.1	0.1	0	0.1	3.9	0.1	0	0
REF. NO. / MODE		IC501																			
		21	22																		
SP	PLAY	3.1	3.2																		
	REC	0	0.3																		
LP	PLAY	3.1	3.1																		
	REC	0.1	0.3																		
SLP	PLAY	3.1	3.1																		
	REC	0.1	0.3																		

3-15. HEAD AMP CIRCUIT BOARD (VEP05076A)

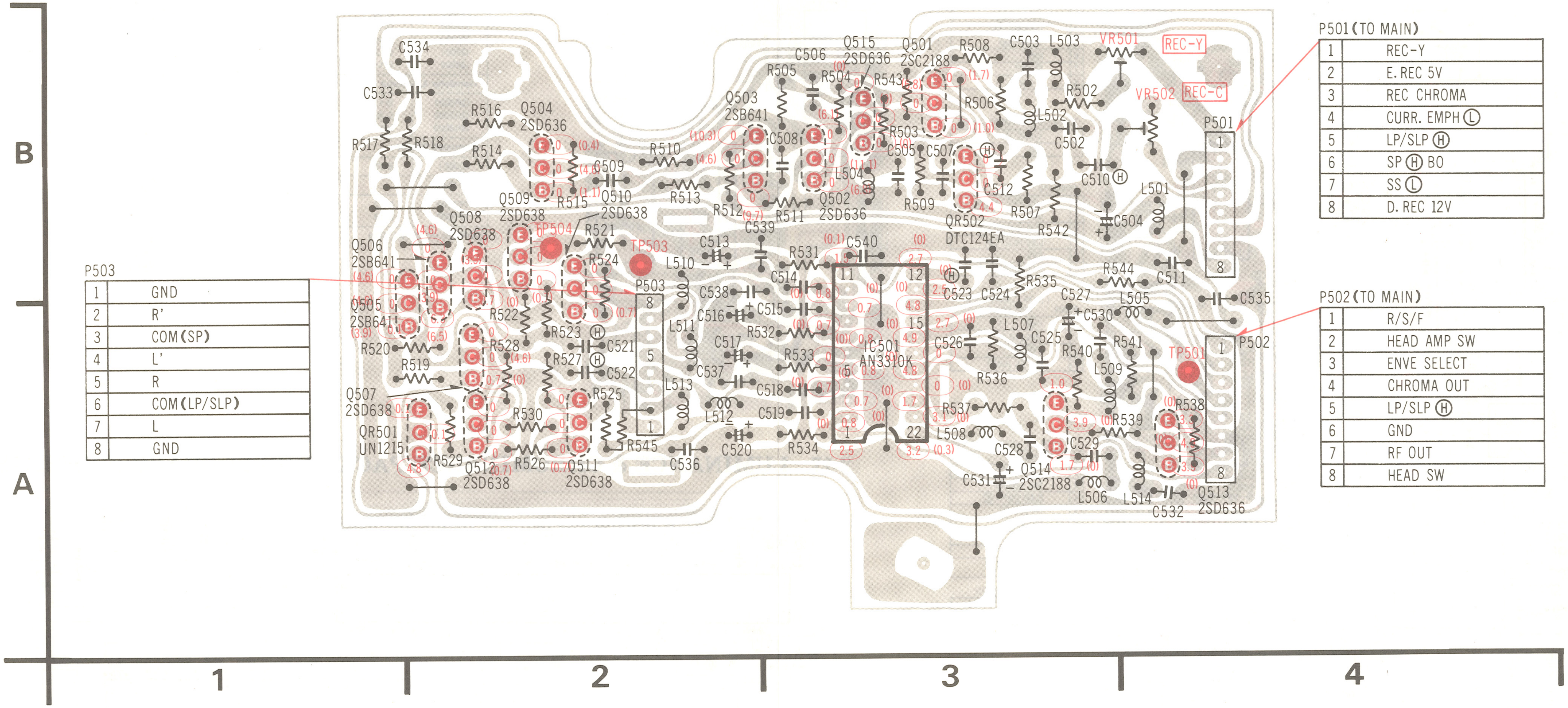

B
A
1
2
P503
1 GND
2 R'
3 COM(SP)
4 L'
5 R
6 COM(LP/SLP)
7 L
8 GND
C534
C533
R516
Q504
2SD636
R517
R518
R514
Q509
R515
Q510
2SD638
R510
R513
R512
R511
Q502
2SD636
Q503
2SB641
C506
R505
R504
Q515
2SD636
C508
L504
Q508
2SD638
TP504
R521
TP503
R524
C513
C539
C540
R531
C514
L510
Q506
2SB641
Q505
2SB641
R522
R523
C538
C516
C515
R532
L511
R520
R528
C521
R527
C522
R519
C517
C537
R533
C518
IC501
AN3310K
Q507
2SD638
QR501
UN1215
R529
Q512
2SD638
R530
R526
Q511
2SD638
R525
R545
L513
L512
C519
C520
C536
R534
E
C
B

ICs & TRANSISTORs INFORMATION


11
12
1
22
AN3310K
E C B
2SC2188
2SD636
2SB641
2SD638
10K
B
C
E
E C B
UN1215
22K
22K
B
C
E
E C B
DTC124EA

505		Q506		
C	B	E	C	B
0	0.1	0	0	6.3
4.6	3.9	4.6	3.9	6.5
0	8.5	0	0	0
0.7	8.5	4.8	5.1	4.4
0	8.4	0	0	0
0.7	8.5	4.8	5.1	4.3
511		Q512		
C	B	E	C	B
0	0	0	0	0
0	0.7	0	0	0.7
0	0.6	0	0	0.7
0	0.7	0	0	0.7
0	0.6	0	0	0.7
0	0.7	0	0	0.7

3-15. HEAD AMP CIRCUIT BOARD (VEP05076A)


B
A
1
2
3
4
C534
C533
R516
Q504
2SD636
R517
R518
R514
Q509
R515
Q510
2SD638
R510
R513
R512
R511
C509
C539
Q503
2SB641
C506
R505
Q515
2SD636
R504
Q501
2SC2188
R543
R508
C503
L503
VR501
REC-Y
VR502
REC-C
R506
R502
L502
C502
R503
C505
C507
C508
L504
Q502
2SD636
R509
C512
QR502
DTC124EA
R507
R542
C510 Ⓗ
L501
C504
Q508
2SD638
TP504
R521
TP503
Q506
2SB641
Q505
2SB641
R520
R519
R522
R524
R523 Ⓗ
R528
R527 Ⓗ
C521
C522
Q507
2SD638
QR501
UN1215
R529
Q512
2SD638
R530
R526
R525
Q511
2SD638
R545
P503
L510
C513
C514
C538
C516
C515
L511
C517
C537
C518
L513
L512
C519
C520
C536
R531
C540
R532
R533
R534
IC501
AN3310K
11
12
15
5
22
1
Ⓗ
C523
C524
R535
C527
L505
C530
C526
L507
C525
R540
R541
R536
L509
TP501
R537
L508
C528
R538
R539
C529
Q514
2SC2188
C531
L506
L514
C532
Q513
2SD636
R544
C511
C535
P501
P502
P501 (TO MAIN)
P502 (TO MAIN)

P503

1	GND
2	R'
3	COM (SP)
4	L'
5	R
6	COM (LP/SLP)
7	L
8	GND

P501 (TO MAIN)

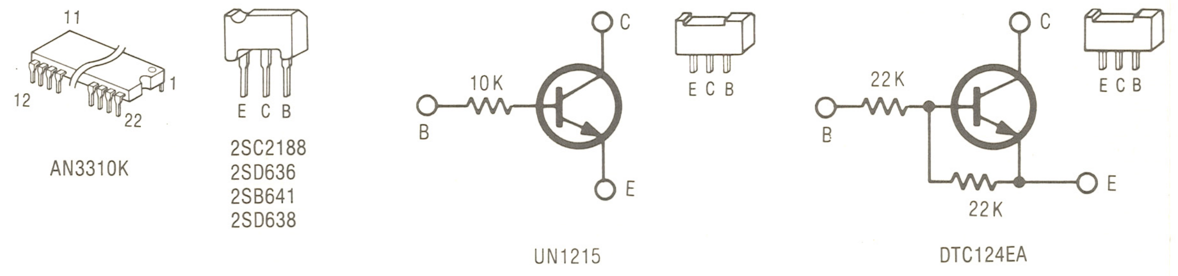
1	REC-Y
2	E. REC 5V
3	REC CHROMA
4	CURR. EMPH Ⓛ
5	LP/SLP Ⓗ
6	SP Ⓗ BO
7	SS Ⓛ
8	D. REC 12V

P502 (TO MAIN)

1	R/S/F
2	HEAD AMP SW
3	ENVE SELECT
4	CHROMA OUT
5	LP/SLP Ⓗ
6	GND
7	RF OUT
8	HEAD SW

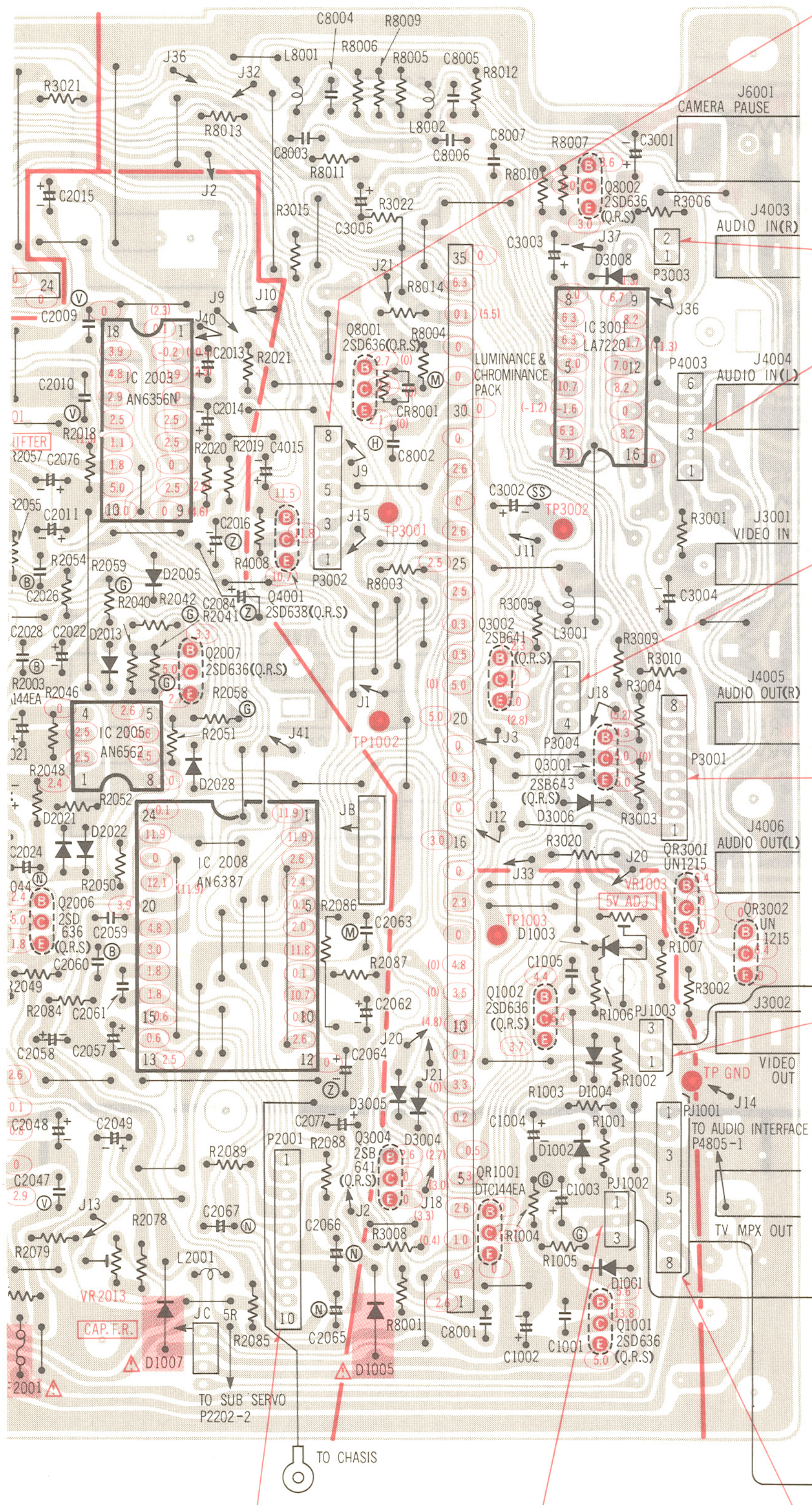
4	15	16	17	18	19	20
8	2.7	4.9	0	4.8	0	1.7
	0	0	0.1	0	0	0
8	2.8	4.8	3.8	4.8	0	1.7
1	0	0.1	3.8	0.1	0	0
8	2.8	4.8	3.8	4.8	0	1.7
1	0	0.1	3.9	0.1	0	0

ICs & TRANSISTORs INFORMATION


11
12
1
22
AN3310K
E C B
2SC2188
2SD636
2SB641
2SD638
10K
B
C
E
E C B
UN1215
22K
B
C
E
22K
E C B
DTC124EA

Next Page:
LUMINANCE & CHROMINANCE Section

3-16. LUMINANCE & CHROMINANCE Section in Main Circuit Board (VEP03276A1)


J36
J32
L8001
C8004
R8009
R8006
R8005
C8005
R8012
R3021
R8013
J6001
CAMERA PAUSE
C8003
C8006
L8002
C8007
R8011
R8007
R8010
C3001
Q8002
2SD636
(Q.R.S)
R3006
J4003
AUDIO IN(R)
C2015
J2
R3015
R3022
C3005
C3003
J37
D3008
P3003
J21
R8014
IC3001
LA7220
J36
P4003
J4004
AUDIO IN(L)
J9
J10
Q8001
2SD636(Q.R.S)
R8004
CR8001
C8002
LUMINANCE & CHROMINANCE PACK
IC 2003
AN6356N
C2009
C2010
C2014
R2021
R2018
C2076
R2019
C4015
LIFTER
J15
TP3001
TP3002
C3002
R3001
J3001
VIDEO IN
J11
P3002
R8003
R3005
C3004
D2005
R2059
R2054
R2042
R2041
Q4001
2SD638(Q.R.S)
Q3002
2SB641
(Q.R.S)
L3001
R3009
R3010
J4005
AUDIO OUT(R)
Q2007
2SD636(Q.R.S)
R2058
J18
R3004
IC 2005
AN6562
R2051
J41
TP1002
J1
D2028
P3004
Q3001
2SB643
(Q.R.S)
D3006
P3001
J4006
AUDIO OUT(L)
J8
J12
R3020
R3003
QR3001
UN1215
IC 2008
AN6387
R2050
Q2006
2SD636
(Q.R.S)
C2059
C2060
R2086
C2063
R2087
J33
J20
VR1003
5V ADJ.
TP1003
D1003
C1005
R1007
QR3002
UN1215
Q1002
2SD636
(Q.R.S)
R1006
PJ1003
R3002
J3002
VIDEO OUT
C2062
C2064
J20
J21
R1003
D1004
R1002
TP GND
PJ1001
J14
TO AUDIO INTERFACE
P4805-1
D3005
Q3004
2SB641
(Q.R.S)
D3004
C1004
D1002
R1001
QR1001
DTC144EA
C1003
PJ1002
TV MPX OUT
R2089
P2001
R2088
C2049
C2047
J13
R2078
C2067
C2066
R3008
J18
R1004
R1005
D1001
R2079
L2001
VR2013
CAP. F.R.
D1007
JC
SR
R2085
C2065
R8001
D1005
C8001
C1002
C1001
Q1001
2SD636
(Q.R.S)
TO SUB SERVO
P2202-2
TO CHASIS

P3002 (TO HEAD AMP PACK)

1	R/S/F
2	HEAD AMP SW
3	ENV. SELECT
4	CHROMA OUT
5	LP/SLP Ⓗ
6	GND
7	RF OUT
8	H. SW

P3003 (TO TV DEMODULATOR)

1	VIDEO IN
2	GND

P4003 (TO FM AUDIO)

1	LINE OUT (R-CH)
2	GND
3	LINE OUT (L-CH)
4	LINE IN (L-CH)
5	GND
6	LINE IN (R-CH)

P3004 (TO RF CONVERTER & ANTENNA BOOSTER)

1	GND
2	VIDEO OUT
3	VTR Ⓗ
4	REG 6V (SWD)

P3001 (TO HEAD AMP PACK)

1	REC-Y
2	EXCEPT REC 5V
3	REC CHROMA
4	CURR. EMPH Ⓛ
5	LP/SLP Ⓗ
6	SP Ⓗ
7	SS Ⓛ
8	D. REC 12V

PJ1003 (TO POWER Tr (2))

1	Ⓑ
2	UNREG 10V Ⓒ
3	REG 5V (SWD) Ⓔ

P2202 (TO MAIN-DIRECT JUMPI

1	SLP Ⓗ
2	+5V
3	SYSTEM CTL 5V
4	VSS BRANCH
5	LP SLOW TRACKING

P2001 (TO CYL MOTOR)

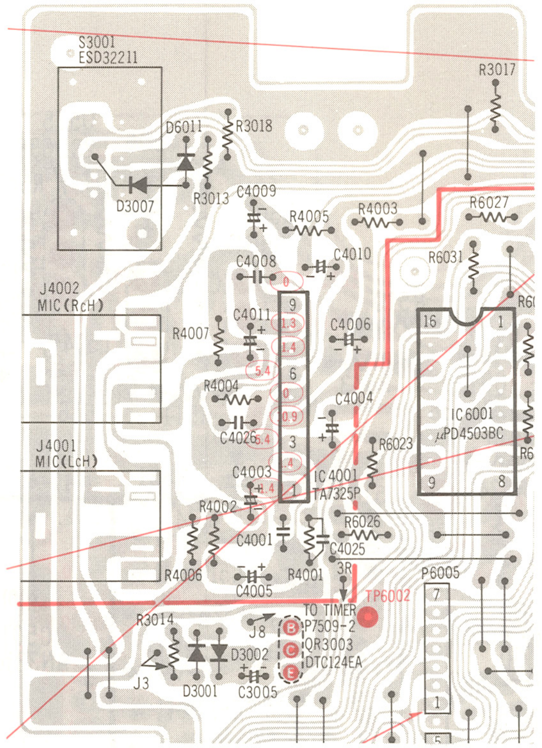
1	M_2
2	VH^+
3	HES
4	M_3
5	HEM
6	GND
7	M. COM
8	$\overline{HEM}$
9	$\overline{HES}$
10	M_1

PJ1002 (TO POWER Tr (3))

1	REG 12V (SWD)
2	UNREG 17V
3	REG 12.6V (SWD)

PJ1001 (TO INTER FACE)

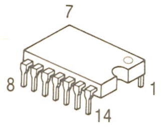
1	UNREG 10V
2	UNREG 45V
3	GND
4	GND
5	UNREG 17V
6	REG 6V
7	MOTOR REG
8	MOTOR GND


S3001
ESD32211
R3017
D6011
R3018
D3007
R3013
C4009
R4005
R4003
R6027
C4008
C4010
R6031
J4002
MIC(R-CH)
C4011
C4006
R4007
R4004
C4004
IC6001
μPD4503BC
C4026
R6023
J4001
MIC(L-CH)
C4003
IC4001
TA7325P
R4002
C4001
R6026
C4025
R4006
R4001
C4005
P6005
TP6002
TO TIMER
P7509-2
R3014
J8
QR3003
DTC124EA
D3002
J3
D3001
C3005

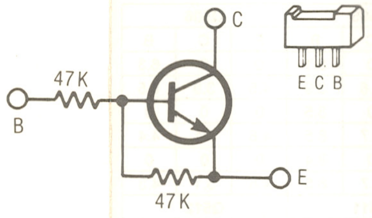
LUMINANCE & CHROMINANCE CIRCUIT BOARD	
Transistor	
Q3001 Q3002 Q3004 Q8001 Q8002	D-13 D-12 C-12 E-12 E-13
Transistor & Resistor	
QR3001 QR3002 QR3003	D-13 C-13 D-6
Integrated Circuit	
IC3001	E-13
Test Point	
TP3001 TP3002	E-12 E-13

ADDRESS INFORMATION

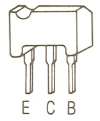
ICs & TRANSISTORs INFORMATION



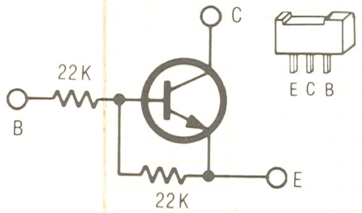
LA7220


C
B
47K
47K
E
E C B

DTC144EA

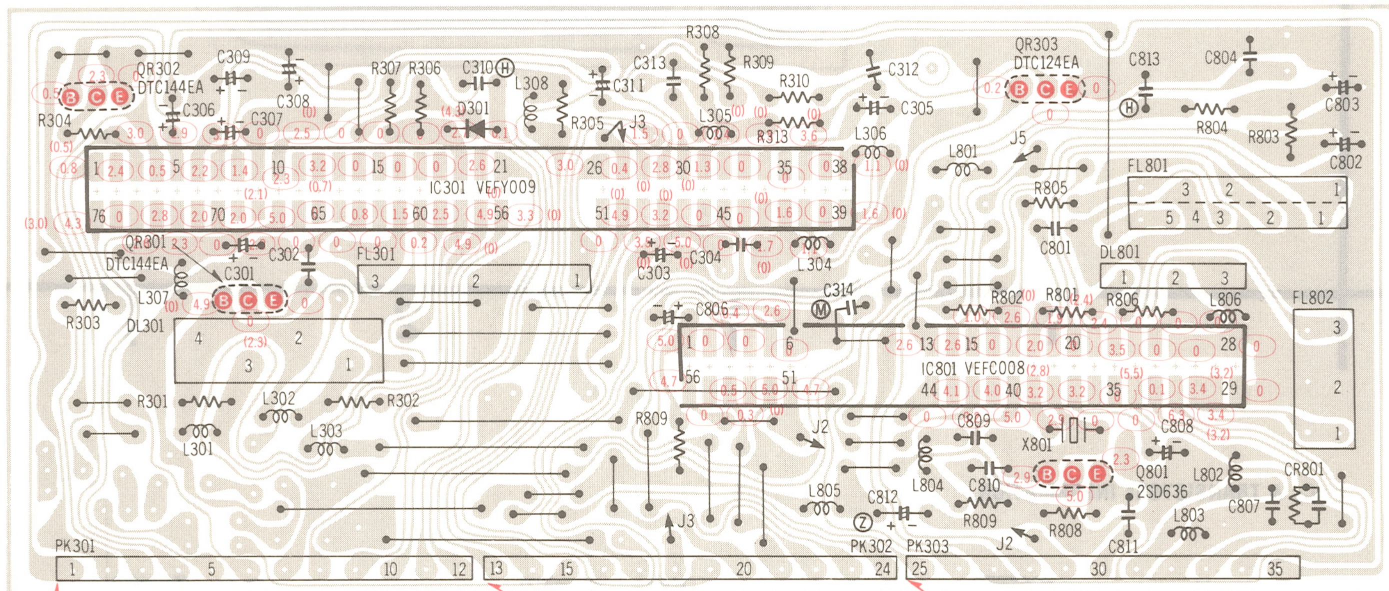


2SD636
2SB641
2SB643


C
B
22K
22K
E
E C B

DTC124EA

3-17. LUMINANCE & CHROMINANCE PACK CIRCUIT BOARD (VEP03271B)


R308
QR303
DTC124EA
C813
C804
QR302
DTC144EA
C309
R307
R306
C310
R309
C313
C311
C312
R310
C305
C803
R304
C306
C307
C308
L308
D301
R305
J3
L305
R313
L306
R804
R803
C802
L801
J5
IC301 VEF1009
FL801
R805
QR301
DTC144EA
C301
C302
FL301
C303
C304
L304
C801
DL801
L307
C314
R802
R801
R806
L806
FL802
R303
DL301
C806
IC801 VEFC008
R301
L302
R302
L303
L301
R809
J2
C809
X801
C808
Q801
2SD636
L802
CR801
L805
C812
L804
C810
R808
L803
C807
C811
J3
PK301
PK302
PK303
J2
1
5
10
12
13
15
20
24
25
30
35

PK 301

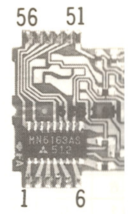
1	REC CHROMA
2	GND
3	VSS
4	WHITE CLIP ADJ.
5	REC Y
6	SYNC SEP. OUT
7	6H Ⓗ
8	RF IN
9	ARTIFICIAL V-SYNC
10	EE Ⓗ
11	ENV
12	D.O.C

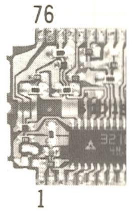
PK 302

13	PICTURE CONT
14	VIDEO OUT
15	———
16	V. PULSE
17	———
18	H PULSE IN
19	———
20	+5V
21	EX. REC 5V
22	SYNCSEP IN
23	H PULSE OUT
24	ROTARY SW

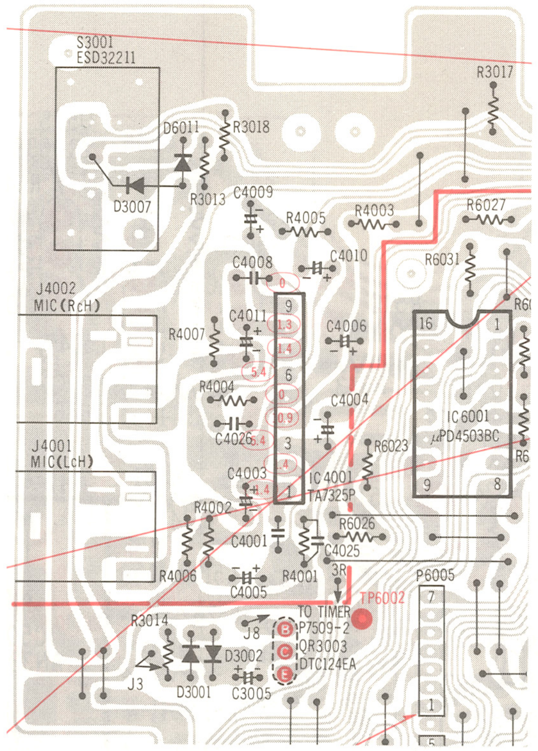
PK303

25	H. SW
26	MIX CHROMA IN
27	GND
28	MIX CHROMA OUT
29	———
30	3.58 MHz
31	P.B.CHROMA IN
32	GND
33	REC Ⓗ
34	CHROMA IN
35	VIDEO IN





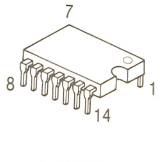
t Board (VEP03276A1)


S3001
ESD32211
R3017
D6011
R3018
D3007
R3013
C4009
R4005
R4003
R6027
C4008
C4010
R6031
J4002
MIC (RcH)
R4007
C4011
C4006
R4004
C4004
IC6001
μPD4503BC
J4001
MIC (LcH)
C4026
R6023
C4003
IC4001
TA7325P
R4002
R6026
C4001
C4025
R4006
R4001
C4005
P6005
TP6002
R3014
TO TIMER
P7509-2
J8
QR3003
DTC124EA
D3002
J3
D3001
C3005

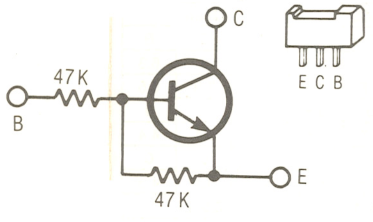
LUMINANCE & CHROMINANCE CIRCUIT BOARD	
Transistor	
Q3001	D-13
Q3002	D-12
Q3004	C-12
Q8001	E-12
Q8002	E-13
Transistor & Resistor	
QR3001	D-13
QR3002	C-13
QR3003	D-6
Integrated Circuit	
IC3001	E-13
Test Point	
TP3001	E-12
TP3002	E-13

ADDRESS INFORMATION

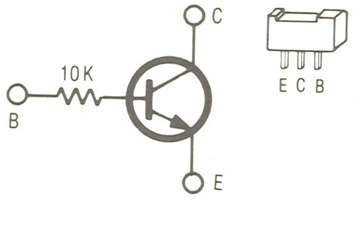
ICs & TRANSISTORs INFORMATION



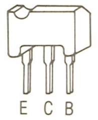
LA7220


C
47K
B
E
47K
E C B

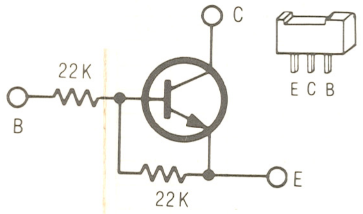
DTC144EA



UN1215

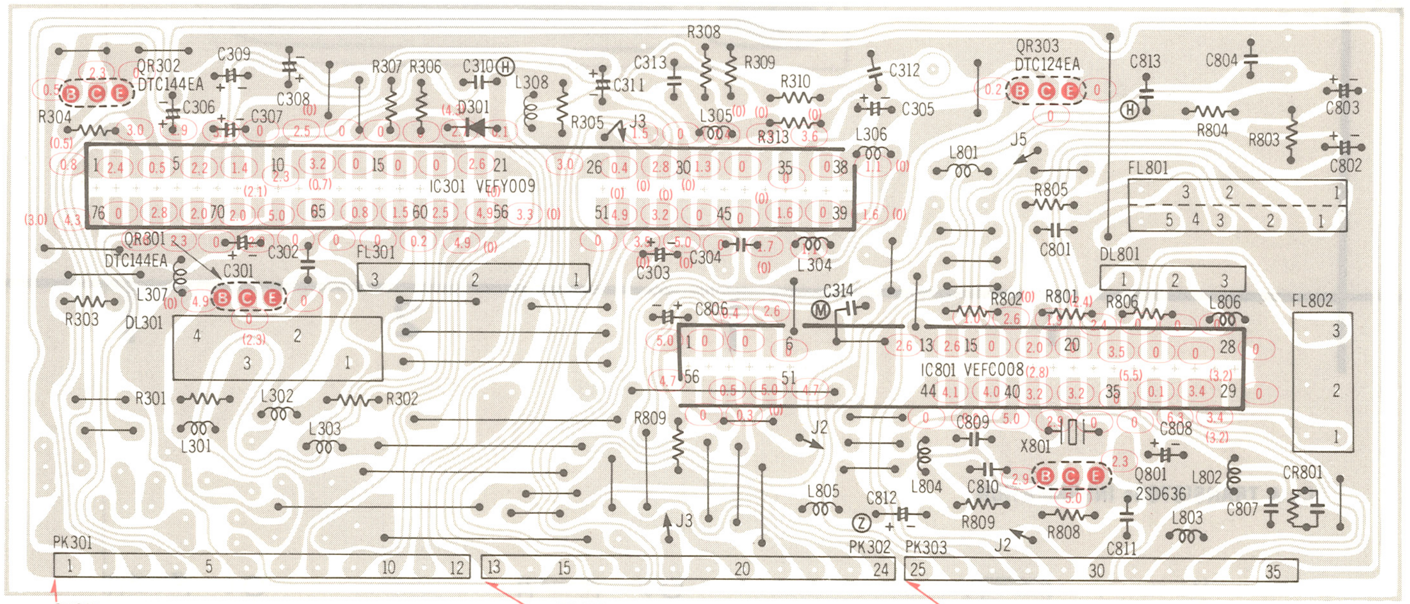


2SD636
2SB641
2SB643


C
22K
B
E
22K
E C B

DTC124EA

3-17. LUMINANCE & CHROMINANCE PACK CIRCUIT BOARD (VEP03271B)


QR302
DTC144EA
C309
R308
R307
R306
C310
C313
R309
QR303
DTC124EA
C813
C804
R304
C306
C307
C308
D301
L308
C311
R310
C312
R305
J3
L305
C305
R313
L306
R804
R803
C803
C802
L801
J5
FL801
R805
IC301 VEFY009
QR301
DTC144EA
C301
C302
FL301
C304
C801
DL801
R303
L307
DL301
C303
L304
C314
C806
R802
R801
R806
L806
FL802
IC801 VEFC008
R301
L302
R302
L301
L303
R809
J2
C809
X801
C808
Q801
2SD636
L802
CR801
L805
C812
L804
C810
R809
R808
L803
C807
PK301
PK302
PK303
C811
1
5
10
12
13
15
20
24
25
30
35

PK 301

1	REC CHROMA
2	GND
3	VSS
4	WHITE CLIP ADJ.
5	REC Y
6	SYNC SEP. OUT
7	6H Ⓗ
8	RF IN
9	ARTIFICIAL V-SYNC
10	EE Ⓗ
11	ENV
12	D.O.C

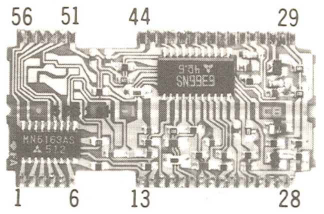
PK 302

13	PICTURE CONT
14	VIDEO OUT
15	————
16	V. PULSE
17	————
18	H PULSE IN
19	————
20	+5V
21	EX. REC 5V
22	SYNCSEP IN
23	H PULSE OUT
24	ROTARY SW

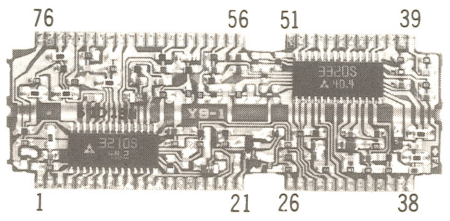
PK303

25	H. SW
26	MIX CHROMA IN
27	GND
28	MIX CHROMA OUT
29	————
30	3.58 MHz
31	P.B. CHROMA IN
32	GND
33	REC Ⓗ
34	CHROMA IN
35	VIDEO IN

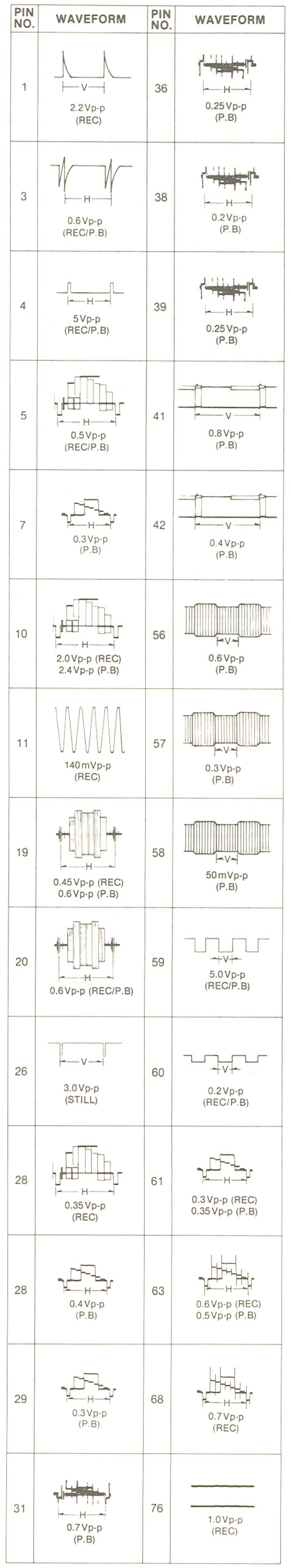
VEFC008


56
51
44
29
1
6
13
28

VEFY009

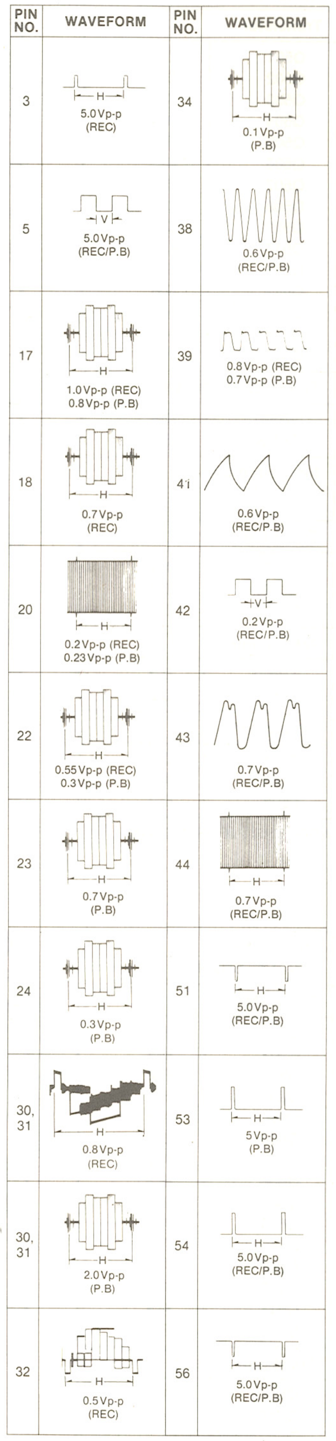

76
56
51
39
1
21
26
38

IC301 (VEFY009)



PIN NO.	WAVEFORM	PIN NO.	WAVEFORM
1	V 2.2 Vp-p (REC)	36	H 0.25 Vp-p (P.B)
3	H 0.6 Vp-p (REC/P.B)	38	H 0.2 Vp-p (P.B)
4	H 5 Vp-p (REC/P.B)	39	H 0.25 Vp-p (P.B)
5	H 0.5 Vp-p (REC/P.B)	41	V 0.8 Vp-p (P.B)
7	H 0.3 Vp-p (P.B)	42	V 0.4 Vp-p (P.B)
10	H 2.0 Vp-p (REC) 2.4 Vp-p (P.B)	56	V 0.6 Vp-p (P.B)
11	140 mVp-p (REC)	57	V 0.3 Vp-p (P.B)
19	H 0.45 Vp-p (REC) 0.6 Vp-p (P.B)	58	V 50 mVp-p (P.B)
20	H 0.6 Vp-p (REC/P.B)	59	V 5.0 Vp-p (REC/P.B)
26	V 3.0 Vp-p (STILL)	60	V 0.2 Vp-p (REC/P.B)
28	H 0.35 Vp-p (REC)	61	H 0.3 Vp-p (REC) 0.35 Vp-p (P.B)
28	H 0.4 Vp-p (P.B)	63	H 0.6 Vp-p (REC) 0.5 Vp-p (P.B)
29	H 0.3 Vp-p (P.B)	68	H 0.7 Vp-p (REC)
31	H 0.7 Vp-p (P.B)	76	1.0 Vp-p (REC)

IC801 (VEFC008)



PIN NO.	WAVEFORM	PIN NO.	WAVEFORM
3	H 5.0 Vp-p (REC)	34	H 0.1 Vp-p (P.B)
5	V 5.0 Vp-p (REC/P.B)	38	0.6 Vp-p (REC/P.B)
17	H 1.0 Vp-p (REC) 0.8 Vp-p (P.B)	39	0.8 Vp-p (REC) 0.7 Vp-p (P.B)
18	H 0.7 Vp-p (REC)	41	0.6 Vp-p (REC/P.B)
20	H 0.2 Vp-p (REC) 0.23 Vp-p (P.B)	42	V 0.2 Vp-p (REC/P.B)
22	H 0.55 Vp-p (REC) 0.3 Vp-p (P.B)	43	0.7 Vp-p (REC/P.B)
23	H 0.7 Vp-p (P.B)	44	H 0.7 Vp-p (REC/P.B)
24	H 0.3 Vp-p (P.B)	51	H 5.0 Vp-p (REC/P.B)
30, 31	H 0.8 Vp-p (REC)	53	H 5 Vp-p (P.B)
30, 31	H 2.0 Vp-p (P.B)	54	H 5.0 Vp-p (REC/P.B)
32	H 0.5 Vp-p (REC)	56	H 5.0 Vp-p (REC/P.B)

LUMINANCE & CHROMINANCE PACK ICs VOLTAGE CHART

REF. NO.		IC301																			
MODE		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
SP	PLAY	0.8	2.4	3.0	0.5	2.9	2.2	3.2	1.4	0	2.3	2.5	3.2	0	0	0	0	0	0	2.7	2.6
	REC	0.5	2.4	2.9	0.5	2.9	2.2	3.2	1.4	0	2.1	0	0.7	0	0	0	0	0	0	4.3	2.7
LP	PLAY	0.8	2.4	3.0	0.5	2.9	2.2	3.2	1.4	0	2.3	2.5	3.2	0	0	0	0	0	0	2.7	2.6
	REC	0.5	2.4	2.9	0.5	2.9	2.2	3.2	1.4	0	2.1	1.6	0.7	0	0	0	0	0	0	4.3	0
SLP	PLAY	0.8	2.4	2.9	0.5	2.9	2.2	3.2	1.4	0	2.4	2.5	3.2	0	0	0	0	0	0	2.7	2.6
	REC	0.4	2.4	2.9	0.5	2.9	2.2	3.2	1.4	0	2.1	2.4	0.7	0	0	0	0	0	0	4.4	2.6

REF. NO.		IC301																			
MODE		21					26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
SP	PLAY	0.1					3.0	0.4	1.5	2.8	0	1.3	2.4	0	3.5	0	3.6	0	1.1	1.6	0
	REC	0.1					3.0	0.4	1.5	0	0	0	0	0	0	0	0	0	0	0	0
LP	PLAY	0.1					3.0	0.4	1.5	2.8	0	1.3	2.4	0	3.5	0	3.6	0	1.1	1.6	0
	REC	0.1					3.0	0.4	1.5	0	0	0	0	0	0	0	0	0	0	0	0
SLP	PLAY	0.1					3.0	0.3	1.5	2.7	1.8	1.3	2.4	0	0	0	3.6	0	1.1	1.6	0
	REC	0.1					3.0	0.3	1.5	0	0	0	0	0	0	0	0	0	0	0	0

REF. NO.		IC301																			
MODE		41	42	43	44	45	46	47	48	49	50	51					56	57	58	59	60
SP	PLAY	1.1	1.6	1.7	0	0	0	5.0	3.2	3.5	4.9	0					3.3	4.9	4.9	2.5	0.2
	REC	0	0	0	0	0	0	0	0	0	0	0					0	0	0	2.5	0.2
LP	PLAY	1.1	1.6	1.7	0	0	0	4.9	3.2	3.5	4.9	0					3.3	4.9	4.9	2.5	2.0
	REC	0	0	0	0	0	0	0	0	0	0	0					0	0	0	2.5	2.0
SLP	PLAY	1.1	1.6	1.7	0	0	0	4.9	3.2	3.4	4.9	0					3.3	4.9	4.9	2.5	3.1
	REC	0	0	0	0	0	0	0	0	0	0	0					0	0	0	2.5	3.1

REF. NO.		IC301																			
MODE		61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76				
SP	PLAY	1.5	0	0.8	0	0	0	5.0	2.0	2.0	0	2.0	2.3	2.8	2.6	0	4.3				
	REC	1.5	0	0.8	0	0	0	5.0	2.1	2.1	0	2.0	2.3	2.8	2.6	0	3.0				
LP	PLAY	1.5	0	0.8	0	0	0	5.0	2.0	2.0	0	2.0	2.3	2.8	2.6	0	4.3				
	REC	1.5	0	0.8	0	0	0	5.0	2.1	2.1	0	2.0	2.3	2.8	2.6	0	3.0				
SLP	PLAY	1.5	0	0.8	0	0	0	5.0	2.0	2.0	0	2.0	2.3	2.8	2.6	0	4.3				
	REC	1.5	0	0.8	0	0	0	5.0	2.1	2.1	0	2.0	2.3	2.8	2.6	0	3.0				

REF. NO.		IC801																			
MODE		1	2	3	4	5	6							13	14	15	16	17	18	19	20
SP	PLAY	5.0	0	0.4	0	2.6	0							2.6	2.6	1.0	0	2.6	2.0	1.9	0
	REC	5.0	0	0.4	0	2.6	0							2.6	2.6	1.0	0	0	2.0	2.4	0
LP	PLAY	5.0	0	0.4	0	2.6	0							2.6	2.6	1.0	0	2.6	2.0	1.9	0
	REC	5.0	0	0.4	0	2.6	0							2.6	2.6	1.0	0	2.5	2.0	2.4	0
SLP	PLAY	5.0	0	0.3	0	2.6	0							2.6	2.6	1.0	0	2.6	2.0	1.9	0
	REC	5.0	0	0.3	0	2.6	0							2.6	2.6	1.0	0	2.6	2.0	2.4	0

REF. NO.		IC801																			
MODE		21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
SP	PLAY	2.4	3.5	0	0	0	0	0	0	0	3.4	3.4	6.3	0.1	0	0	0	3.2	2.9	3.2	5.0
	REC	2.4	3.5	0	0	0	0	0	0	0	3.2	3.2	6.3	5.5	0	0	0	3.3	2.9	2.8	5.0
LP	PLAY	2.5	3.5	0	0	0	0	0	0	0	3.5	3.5	6.3	0.1	0	0	0	3.2	2.9	3.2	5.0
	REC	2.4	3.5	0	0	0	0	0	0	0	3.2	3.2	6.3	5.5	0	0	0	3.2	0	2.8	5.0
SLP	PLAY	2.5	3.5	0	0	0	0	0	0	0	3.4	3.5	6.3	0.1	0	0	0	3.2	2.9	3.2	5.0
	REC	2.4	3.5	0	0	0	0	0	0	0	3.2	3.2	6.3	5.6	0	0	0	3.3	2.9	2.8	5.0

REF. NO.		IC801																			
MODE		41	42	43	44							51	52	53	54	55	56				
SP	PLAY	4.0	0.2	4.1	0							4.7	5.0	0.3	0.5	0	4.7				
	REC	3.9	0.2	4.1	0							4.7	0	0.3	0.5	0	4.7				
LP	PLAY	3.9	2.0	4.1	0							4.7	5.0	0.3	0.5	0	4.7				
	REC	3.9	2.0	4.1	0							4.7	0.1	0.3	0.5	0	4.7				
SLP	PLAY	3.9	3.1	4.1	0							4.7	5.0	0.3	0.5	0	4.7				
	REC	4.0	3.1	4.1	0							4.7	0	0.3	0.5	0	4.7				

LUMINANCE & CHROMINANCE TRANSISTORs VOLTAGE CHART

REF. NO.		Q3001			Q3002			Q3004			Q8001			Q8002					
MODE		E	C	B	E	C	B	E	C	B	E	C	B	E	C	B			
SP	PLAY	5.0	5.0	4.3	3.0	0	2.3	0	0	2.6	2.1	2.9	2.7	3.0	8.0	3.6			
	REC	5.0	0	5.2	2.8	0	2.2	3.3	0	2.7	0	0	0	3.0	8.0	3.6			
LP	PLAY	5.0	5.0	4.3	3.0	0	2.3	0	0	2.6	2.2	2.8	2.8	3.0	8.0	3.6			
	REC	5.1	0	5.2	2.8	0	2.1	3.1	0	2.5	0	0.1	0	3.0	8.0	3.6			
SLP	PLAY	5.0	5.0	4.3	3.0	0	2.3	0	0	2.6	2.1	2.8	2.8	3.0	8.0	3.6			
	REC	5.0	0	5.2	2.8	0	2.1	3.1	0	2.5	0	0.1	0	3.0	8.0	3.6			

REF. NO.		QR3001			QR3002			QR3003											
MODE		E	C	B	E	C	B	E	C	B									
SP	PLAY	0	0	6.4	0	6.4	0	0	1.3	0									
	REC	0	0.1	6.5	0	6.5	0.1	0	1.7	0									
LP	PLAY	0	8.5	0	0	0	3.8	0	1.5	0									
	REC	0	8.5	0.1	0	0.1	3.8	0	1.2	0									
SLP	PLAY	0	8.5	0	0	0	3.9	0	1.6	0									
	REC	0	8.5	0	0	0.1	3.9	0	1.3	0									

LUMINANCE & CHROMINANCE PACK TRANSISTORs VOLTAGE CHART

REF. NO.		Q801																	
MODE		E	C	B															
SP	PLAY	2.3	5.0	2.9															
	REC	2.3	5.0	2.9															
LP	PLAY	2.3	5.0	2.9															
	REC	2.3	5.0	2.9															
SLP	PLAY	2.3	5.0	2.9															
	REC	2.3	5.0	2.9															
REF. NO.		QR301			QR302			QR303											
MODE		E	C	B	E	C	B	E	C	B									
SP	PLAY	0	0	4.9	0	2.3	0.5	0	0	0.2									
	REC	0	2.3	0	0	2.2	0.5	0	0	0.2									
LP	PLAY	0	0	4.9	0	2.2	0.5	0	0	2.0									
	REC	0	2.2	0	0	2.3	0.5	0	0	2.0									
SLP	PLAY	0	0	4.9	0	2.2	0.5	0	0	3.1									
	REC	0	1.1	0	0	2.3	0.5	0	0	3.1									

LUMINANCE & CHROMINANCE SCHEMATIC	
Transistor	
Q3001	B-3
Q3002	F-3
Q3004	E-7
Q8001	C-7
Q8002	F-7
Transistor & Resistor	
QR3001	B-4
QR3002	B-4
QR3003	B-3
Integrated Circuit	
IC3001	E-7
Test Point	
TP3001	C-8
TP3002	F-2
Connector	
P3001	D-9
P3002	C-9
P3003	E-9
P3004	E-1

ADDRESS INFORMATION

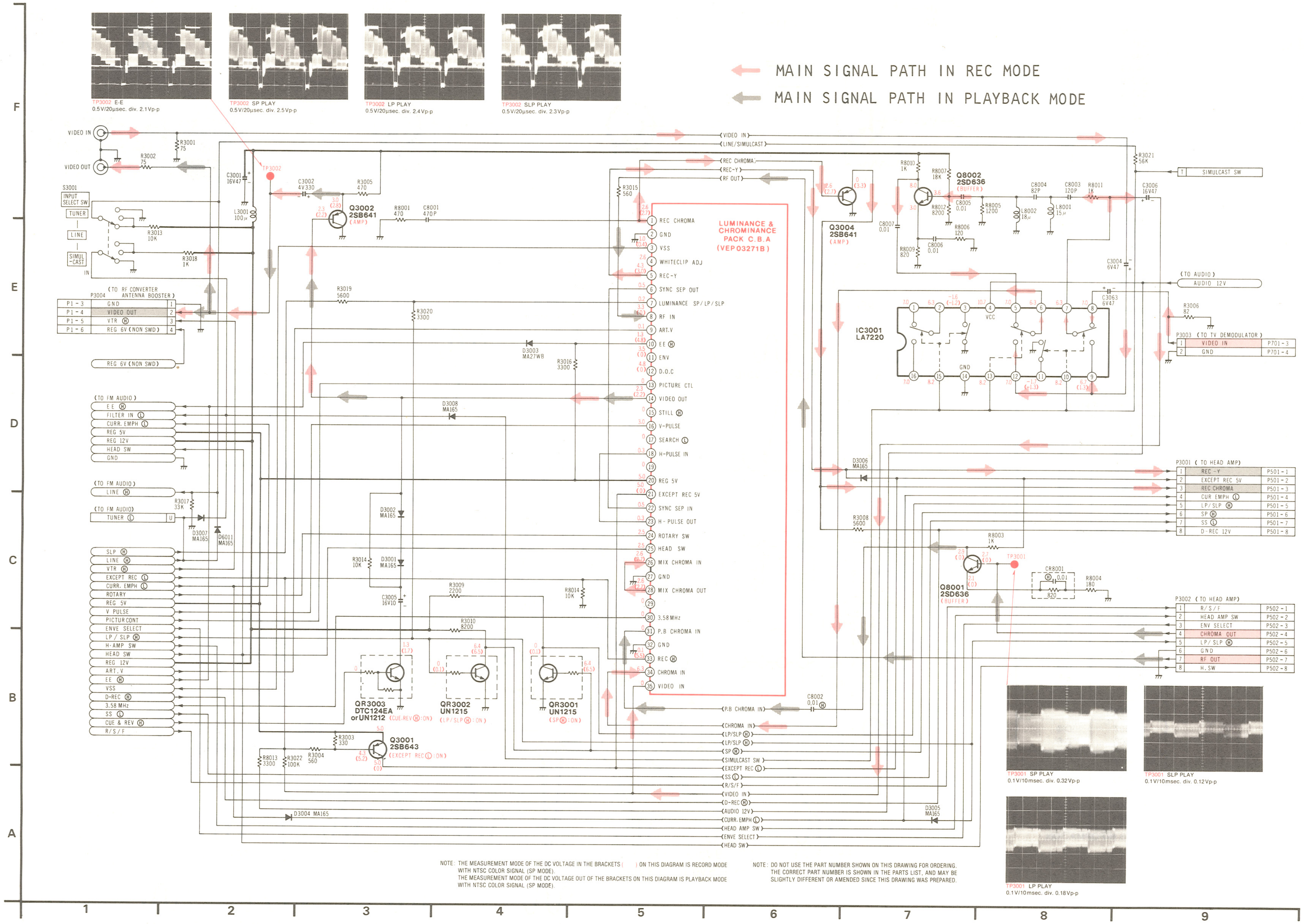
LUMINANCE IC VOLTAGE CHART

REF. NO.		IC3001																			
MODE		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
SP	PLAY	7.0	6.3	−1.6	10.7	7.0	6.3	6.3	7.0	6.7	8.2	−1.7	7.0	8.2	0	8.2	7.0				
	REC	7.0	6.3	−1.2	10.7	7.0	6.3	6.3	7.0	1.3	8.2	−1.3	7.0	8.2	0	8.2	7.0				
LP	PLAY	7.0	6.3	−1.2	10.7	7.0	6.3	6.3	7.0	7.0	8.2	−1.3	7.0	8.2	0	8.2	7.0				
	REC	7.0	6.3	−1.3	10.7	7.0	6.3	6.3	7.0	7.0	8.2	−1.3	7.0	8.2	0	8.2	7.0				
SLP	PLAY	7.0	6.3	−1.4	10.7	7.0	6.3	6.3	7.0	7.0	8.2	−1.4	7.0	8.2	0	8.2	7.0				
	REC	7.0	6.3	−1.4	10.7	7.0	6.3	6.3	7.0	6.9	8.2	−1.4	6.9	8.2	0	8.2	6.9				

LUMINANCE & CHROMINANCE PACK VOLTAGE CHART

REF. NO.		LUMINANCE & CHROMINANCE PACK																			
MODE		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
SP	PLAY	2.6	0	1.0	2.6	4.3	0.5	0.2	3.3	0.1	1.3	3.5	4.8	0	2.3	0	3.0	0	0.3	0	5.0
	REC	2.7	0	0.4	2.6	3.0	0.5	0.2	0	0.1	4.8	0	0	0	2.2	0	3.0	0	0.3	0	5.0
LP	PLAY	2.6	0	1.0	2.6	4.3	0.5	2.0	3.3	0.1	1.3	3.5	4.9	0	2.3	0	3.0	0	0.4	0	5.0
	REC	2.5	0	0.4	2.6	3.0	0.5	2.0	0	0.1	4.8	0	0.1	0	2.2	0	3.0	0	0.4	0	5.0
SLP	PLAY	2.6	0	1.0	2.6	4.3	0.5	3.1	3.3	0.1	1.3	3.4	4.9	0	2.3	0	3.0	0	0.4	0	5.0
	REC	2.5	0	0.4	2.6	3.0	0.5	3.1	0	0.1	4.8	0	0.1	0	2.2	0	2.9	0	0.4	0	5.0
REF. NO.		LUMINANCE & CHROMINANCE PACK																			
MODE		21	22	23	24	25	26	27	28	29	30	31	32	33	34	35					
SP	PLAY	5.0	0.5	0.3	2.5	2.5	2.6	0	2.6	0	0	0	0	0.1	6.3	0					
	REC	0	0.5	0.3	2.5	2.5	2.7	0	2.7	0	0	0	0	5.5	6.3	0					
LP	PLAY	5.0	0.5	0.4	2.6	2.5	2.6	0	2.6	0	0	0	0	0.1	6.3	0					
	REC	0.1	0.5	0.4	2.6	2.5	2.5	0	2.5	0	0	0	0	5.5	6.3	0					
SLP	PLAY	5.0	0.5	0.4	2.6	2.5	2.6	0	2.6	0	0	0	0	0.1	6.3	0					
	REC	0.1	0.5	0.4	2.6	2.5	2.5	0	2.5	0	0	0	0	5.5	6.3	0					

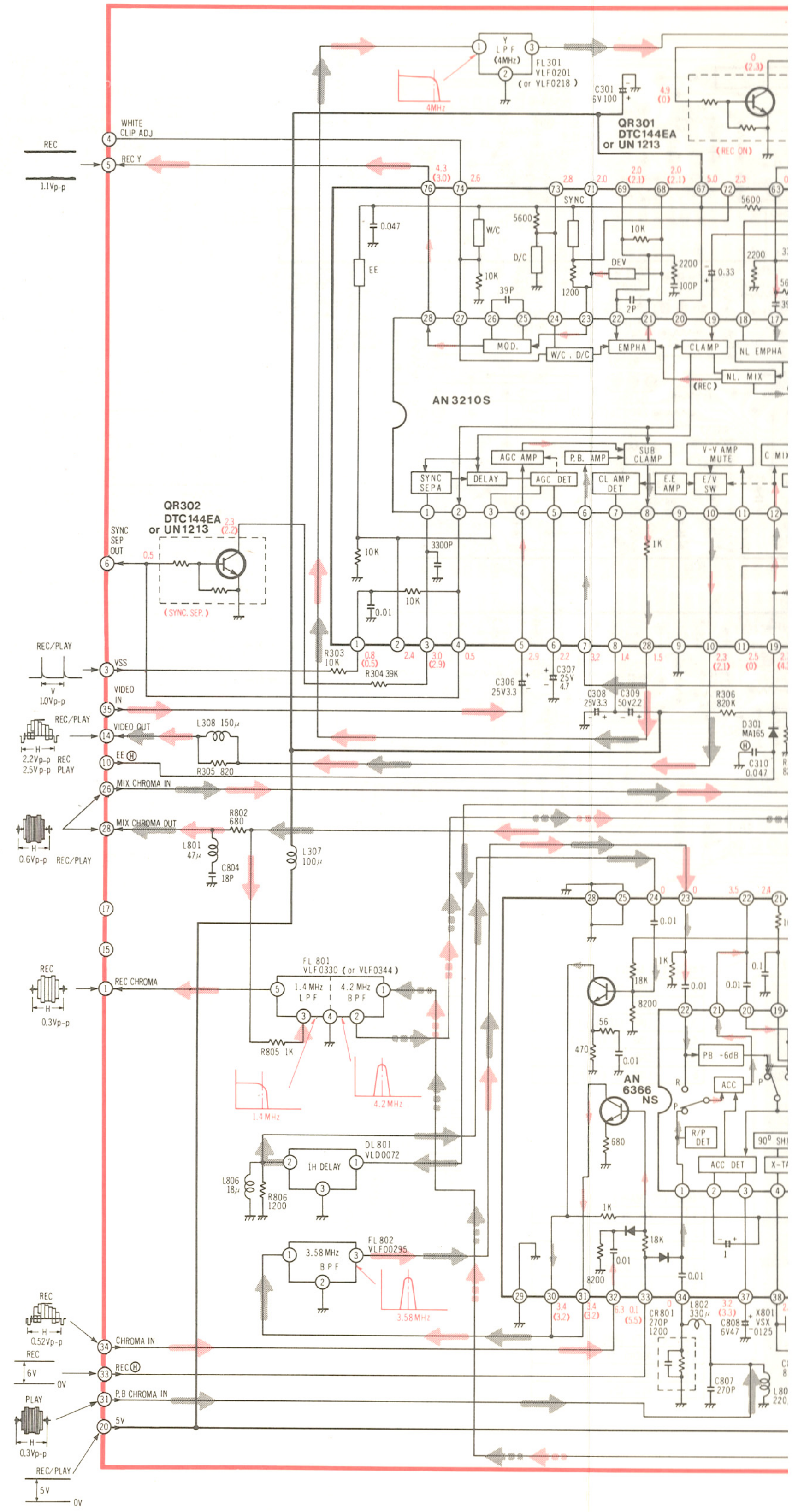
3-18. LUMINANCE & CHROMINANCE SCHEMATIC DIAGRAM


MAIN SIGNAL PATH IN REC MODE
MAIN SIGNAL PATH IN PLAYBACK MODE
TP3002 E-E 0.5V/20μsec. div. 2.1Vp-p
TP3002 SP PLAY 0.5V/20μsec. div. 2.5Vp-p
TP3002 LP PLAY 0.5V/20μsec. div. 2.4Vp-p
TP3002 SLP PLAY 0.5V/20μsec. div. 2.3Vp-p
TP3001 SP PLAY 0.1V/10msec. div. 0.32Vp-p
TP3001 SLP PLAY 0.1V/10msec. div. 0.12Vp-p
TP3001 LP PLAY 0.1V/10msec. div. 0.18Vp-p
VIDEO IN
VIDEO OUT
S3001 INPUT SELECT SW
TUNER
LINE
SIMUL-CAST
LUMINANCE & CHROMINANCE PACK C.B.A (VEP03271B)
Q3002 2SB641 (AMP)
Q3004 2SB641 (AMP)
Q8002 2SD636 (BUFFER)
Q8001 2SD636 (BUFFER)
Q3001 2SB643
QR3003 DTC124EA or UN1212
QR3002 UN1215
QR3001 UN1215
IC3001 LA7220
P3001 (TO HEAD AMP)
P3002 (TO HEAD AMP)
P3003 (TO TV DEMODULATOR)
P3004 (TO RF CONVERTER ANTENNA BOOSTER)
(TO FM AUDIO)
(TO AUDIO)
SIMULCAST SW
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS RECORD MODE WITH NTSC COLOR SIGNAL (SP MODE).
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH NTSC COLOR SIGNAL (SP MODE).

NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

3-19. LUMINANCE & CHROMINANCE PACK

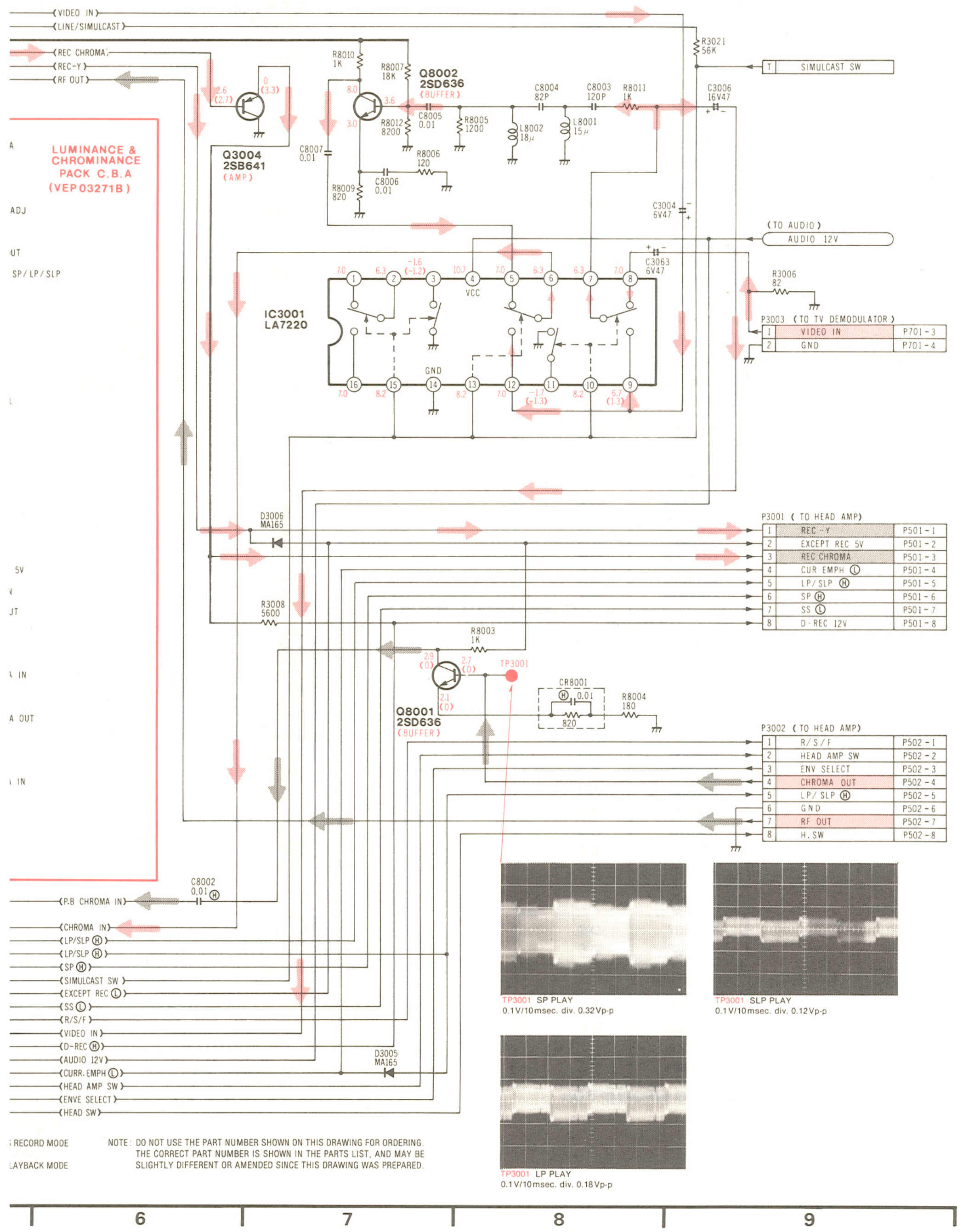

AN3210S
AN6366NS
QR301 DTC144EA or UN1213
QR302 DTC144EA or UN1213
FL301 VLF0201 (or VLF0218)
FL801 VLF0330 (or VLF0344)
FL802 VLF0029S
DL801 VLD0072
1H DELAY
4MHz
1.4MHz
4.2MHz
3.58MHz
WHITE CLIP ADJ
REC Y
SYNC SEP OUT
VIDEO IN
VIDEO OUT
MIX CHROMA IN
MIX CHROMA OUT
REC CHROMA
CHROMA IN
P.B CHROMA IN

MAIN SIGNAL PATH IN REC MODE
MAIN SIGNAL PATH IN PLAYBACK MOD

3-19. LUMINANCE & CHROMINANCE PACK SCHEMATIC DIAGRAM

MAIN SIGNAL PATH IN REC MODE

MAIN SIGNAL PATH IN PLAYBACK MODE


LUMINANCE & CHROMINANCE PACK C.B.A (VEP03271B)
Q3004 2SB641 (AMP)
Q8002 2SD636 (BUFFER)
Q8001 2SD636 (BUFFER)
IC3001 LA7220
R3021 56K
SIMULCAST SW
(TO AUDIO) AUDIO 12V
P3003 (TO TV DEMODULATOR)
VIDEO IN
GND
P3001 (TO HEAD AMP)
REC-Y
EXCEPT REC 5V
REC CHROMA
CUR EMPH Ⓛ
LP/SLP Ⓗ
SP Ⓗ
SS Ⓛ
D-REC 12V
P3002 (TO HEAD AMP)
R/S/I
HEAD AMP SW
ENV SELECT
CHROMA OUT
LP/SLP Ⓗ
GND
RF OUT
H. SW
TP3001
D3005 MA165
(VIDEO IN)
(LINE/SIMULCAST)
(REC CHROMA)
(REC-Y)
(RF OUT)
(P.B CHROMA IN)
(CHROMA IN)
(SIMULCAST SW)
(EXCEPT REC Ⓛ)
(D-REC Ⓗ)
(AUDIO 12V)
(CURR. EMPH Ⓛ)
(HEAD AMP SW)
(ENVE SELECT)
(HEAD SW)
6
7
8
9

TP3001 SP PLAY
0.1V/10msec. div. 0.32Vp-p

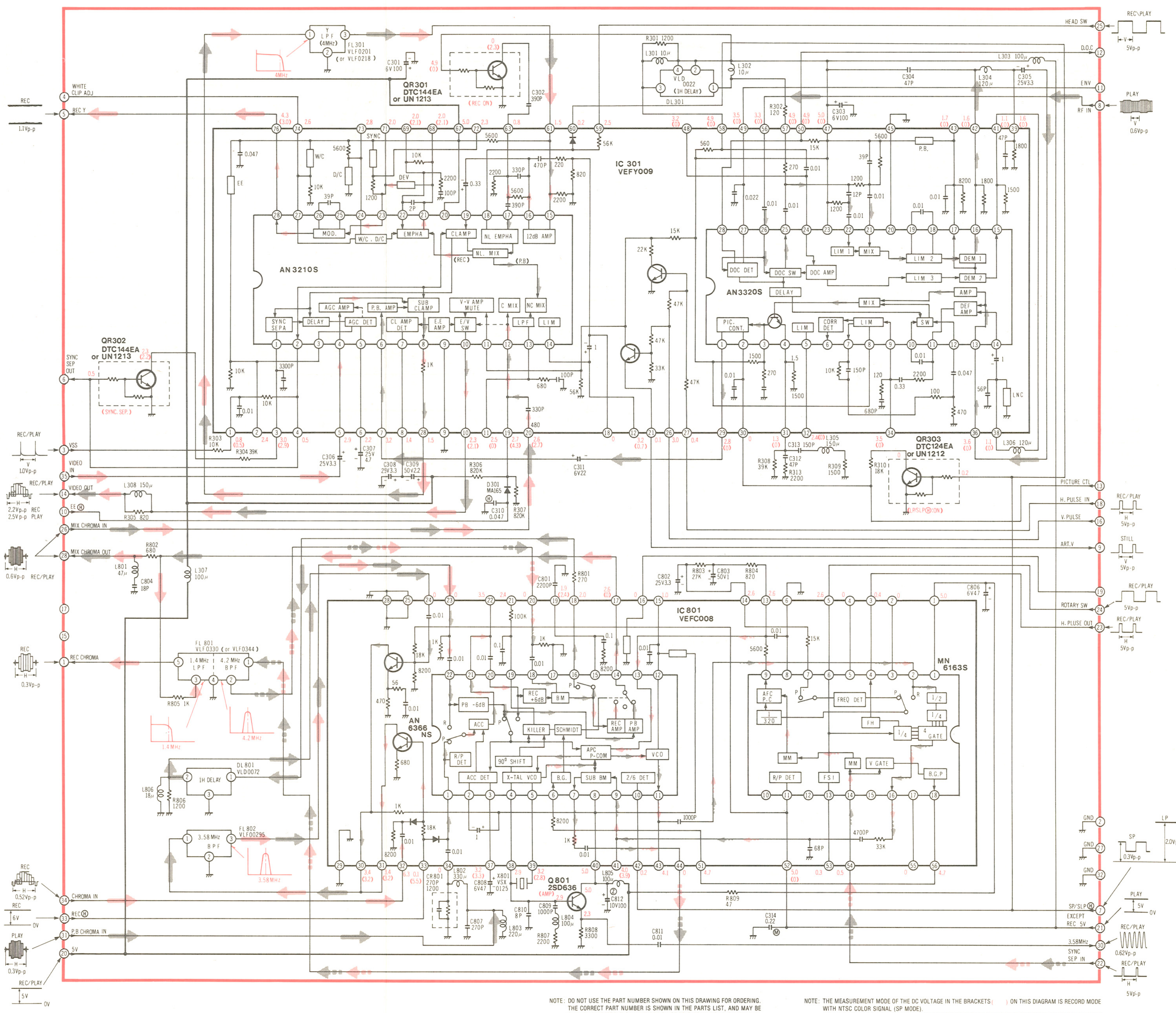
TP3001 SLP PLAY
0.1V/10msec. div. 0.12Vp-p

TP3001 LP PLAY
0.1V/10msec. div. 0.18Vp-p

RECORD MODE

LAYBACK MODE

NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING.
THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE
SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.


IC 301 VEFY009
AN3210S
AN3320S
QR301 DTC144EA or UN1213
QR302 DTC144EA or UN1213 (SYNC SEP.)
QR303 DTC124EA or UN1212
IC 801 VEFC008
AN 6366 NS
MN 6163S
Q801 2SD636 (AMP)
FL301 VLF0201 (or VLF0218)
DL301 VLD0022 (1H DELAY)
FL801 VLF0330 (or VLF0344) LPF BPF
DL801 VLD0072 1H DELAY
FL802 VLF0295 3.58MHz BPF
HEAD SW
D.O.C
ENV
RF IN
PICTURE CTL
H. PULSE IN
V. PULSE
ART.V
ROTARY SW
H. PULSE OUT
SP/SLP
EXCEPT REC 5V
3.58MHz
SYNC SEP IN
WHITE CLIP ADJ
REC Y
SYNC SEP OUT
VIDEO IN
VIDEO OUT
MIX CHROMA IN
MIX CHROMA OUT
REC CHROMA
CHROMA IN
P.B CHROMA IN
REC/PLAY
5Vp-p
0.6Vp-p
0.62Vp-p

NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING.
THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE
SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS RECORD MODE WITH NTSC COLOR SIGNAL (SP MODE).
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH NTSC COLOR SIGNAL (SP MODE).

MAIN SIGNAL PATH IN REC MODE

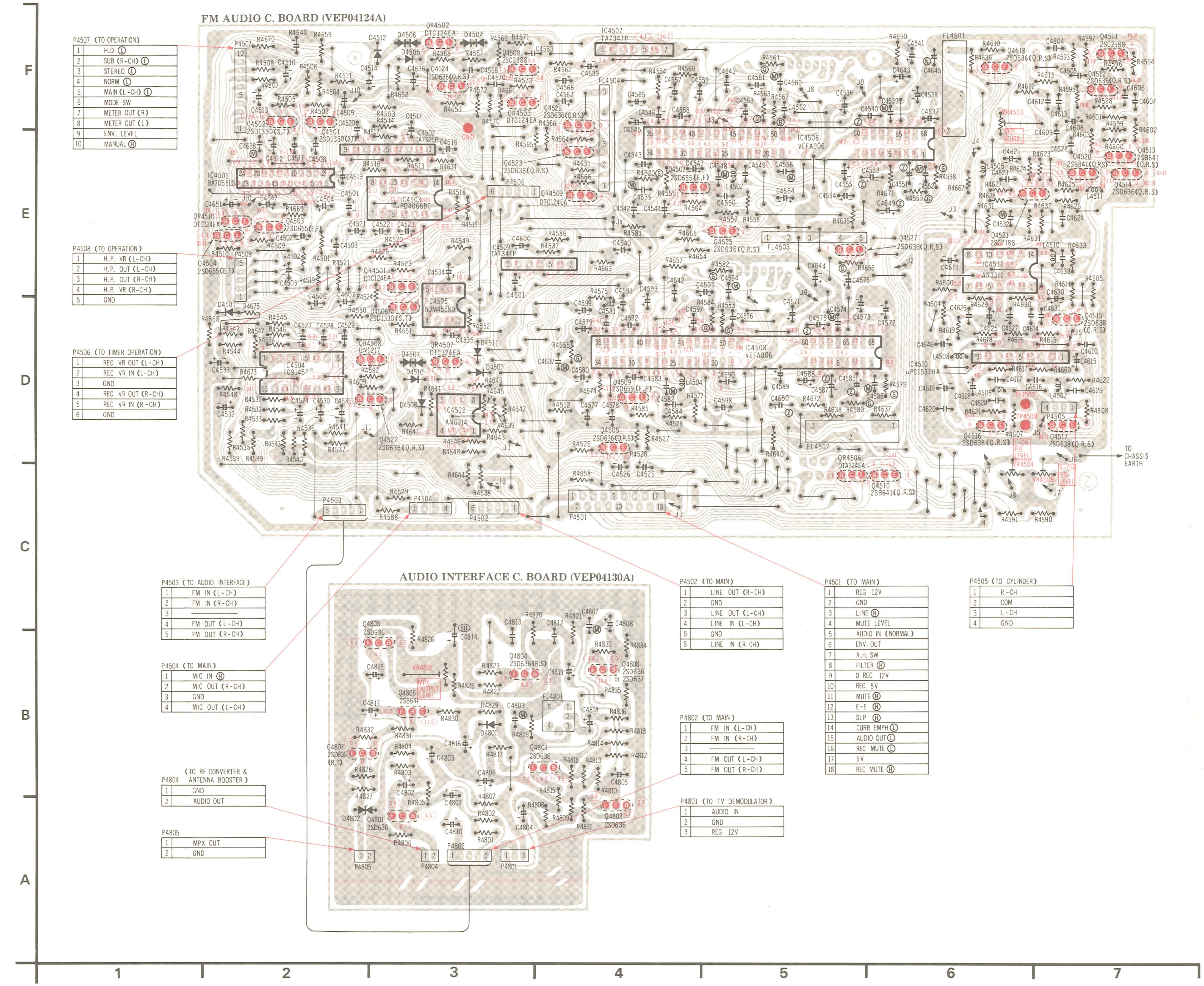
MAIN SIGNAL PATH IN PLAYBACK MODE

4.2MHz PHASE ROTATIONAL SIGNAL IN REC MODE

4.2MHz PHASE ROTATIONAL SIGNAL IN PLAYBACK MODE

Next Page:
FM AUDIO & AUDIO INTERFACE Section

3-20. FM AUDIO & AUDIO INTERFACE CIRCUIT BOARD (VEP04124A, VEP04130A)


FM AUDIO C. BOARD (VEP04124A)
AUDIO INTERFACE C. BOARD (VEP04130A)
IC4501 BA7055LS
IC4502 µPD4066BC
IC4503 µPD4066BC
IC4504 TC9145P
IC4505 NJM4558D
IC4506 VEFA006
IC4507 TA7347P
IC4508 VEFA006
IC4509 TA7347P
IC4510 µPC1531HA
IC4511 AN3312
IC4512 AN6914
TO CHASSIS EARTH
F
E
D
C
B
A
1
2
3
4
5
6
7

P4507 (TO OPERATION)

1	H.D Ⓛ
2	SUB (R-CH) Ⓛ
3	STEREO Ⓛ
4	NORM Ⓛ
5	MAIN (L-CH) Ⓛ
6	MODE SW
7	METER OUT (R)
8	METER OUT (L)
9	ENV. LEVEL
10	MANUAL Ⓗ

P4508 (TO OPERATION)

1	H.P. VR (L-CH)
2	H.P. OUT (L-CH)
3	H.P. OUT (R-CH)
4	H.P. VR (R-CH)
5	GND

P4506 (TO TIMER OPERATION)

1	REC VR OUT (L-CH)
2	REC VR IN (L-CH)
3	GND
4	REC VR OUT (R-CH)
5	REC VR IN (R-CH)
6	GND

P4503 (TO AUDIO INTERFACE)

1	FM IN (L-CH)
2	FM IN (R-CH)
3	――――
4	FM OUT (L-CH)
5	FM OUT (R-CH)

P4504 (TO MAIN)

1	MIC IN Ⓗ
2	MIC OUT (R-CH)
3	GND
4	MIC OUT (L-CH)

P4804 (TO RF CONVERTER & ANTENNA BOOSTER)

1	GND
2	AUDIO OUT

P4805

1	MPX OUT
2	GND

P4502 (TO MAIN)

1	LINE OUT (R-CH)
2	GND
3	LINE OUT (L-CH)
4	LINE IN (L-CH)
5	GND
6	LINE IN (R CH)

P4802 (TO MAIN)

1	FM IN (L-CH)
2	FM IN (R-CH)
3	――――
4	FM OUT (L-CH)
5	FM OUT (R-CH)

P4801 (TO TV DEMODULATOR)

1	AUDIO IN
2	GND
3	REG 12V

P4501 (TO MAIN)

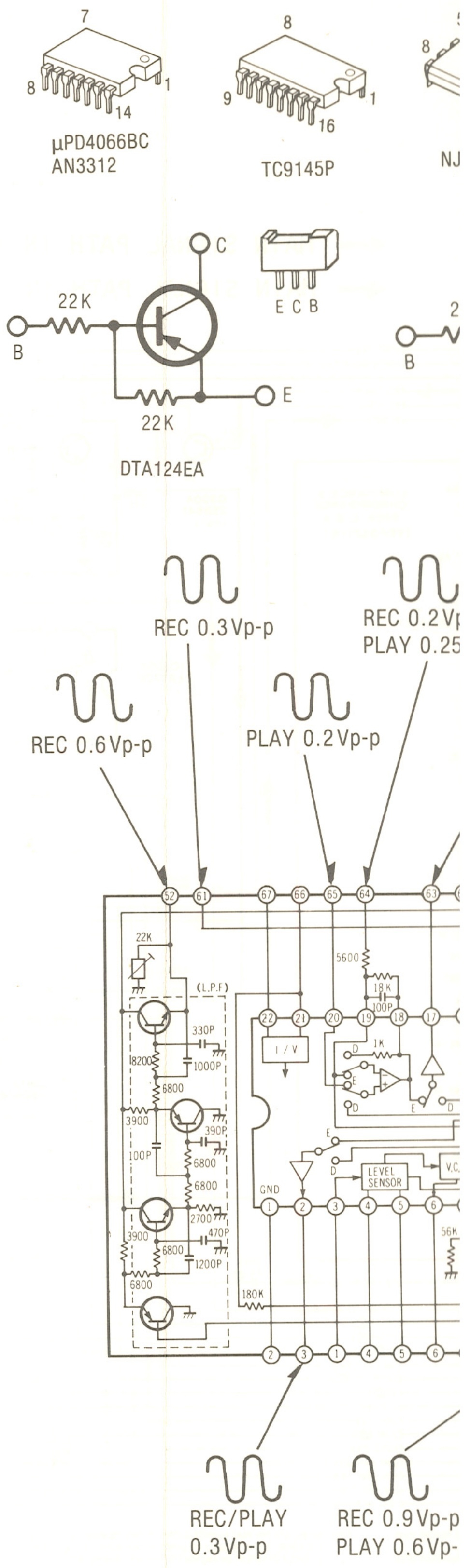
1	REG 12V
2	GND
3	LINE Ⓗ
4	MUTE LEVEL
5	AUDIO IN (NORMAL)
6	ENV. OUT
7	A.H. SW
8	FILTER Ⓗ
9	D REC 12V
10	REC 5V
11	MUTE Ⓗ
12	E-E Ⓗ
13	SLP Ⓗ
14	CURR EMPH Ⓛ
15	AUDIO OUT Ⓛ
16	REC MUTE Ⓛ
17	5V
18	REC MUTE Ⓗ

P4505 (TO CYLINDER)

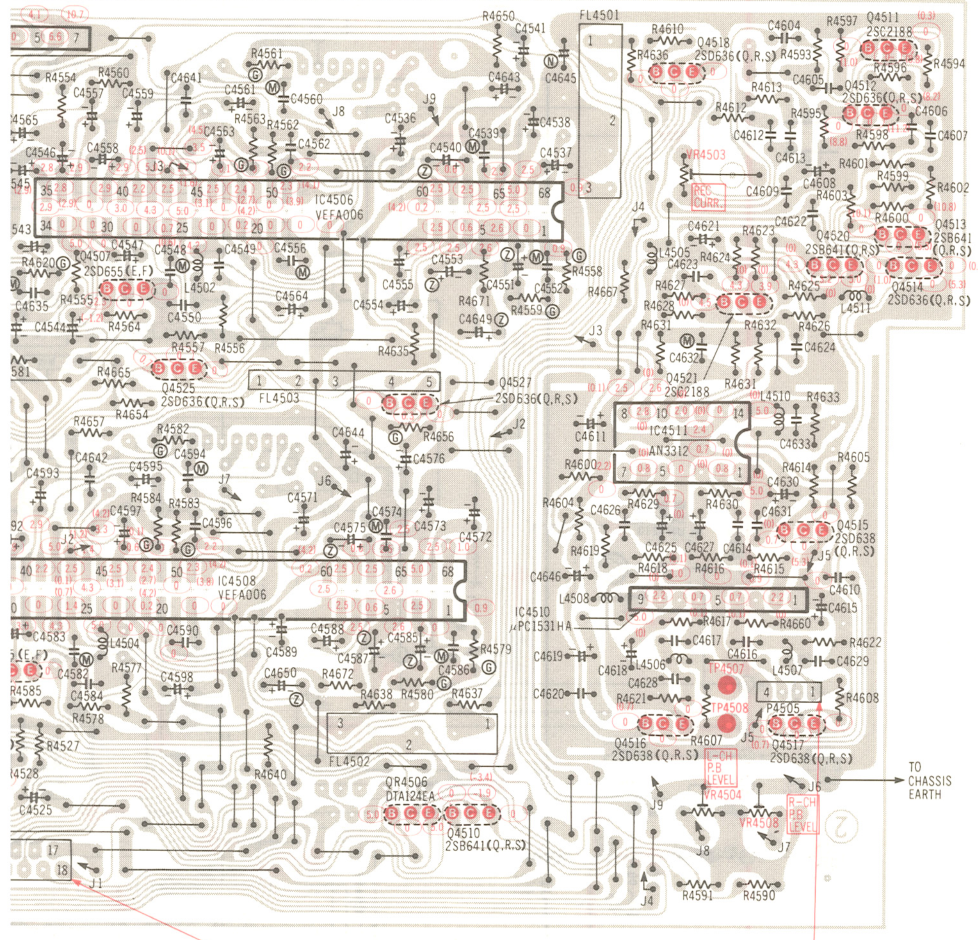
1	R-CH
2	COM
3	L-CH
4	GND

FM AUDIO & AUDIO INTERFACE CIRCUIT BOARD	
Transistor	
Q4501	F-2
Q4502	F-2
Q4503	E-2
Q4504	E-2
Q4505	D-4
Q4506	D-3
Q4507	E-5
Q4508	F-3
Q4509	B-4
Q4510	D-6
Q4511	F-7
Q4512	F-7
Q4513	E-7
Q4514	E-7
Q4515	D-7
Q4516	D-6
Q4517	D-7
Q4518	F-6
Q4520	E-7
Q4521	E-7
Q4522	D-3
Q4523	E-4
Q4524	F-3
Q4525	E-5
Q4526	E-4
Q4527	E-5
Q4801	A-3
Q4802	A-4
Q4803	B-4
Q4804	B-3
Q4805	B-2
Q4806	B-3
Q4807	B-2
Q4808	B-4
Transistor & Resistor	
QR4501	E-3
QR4502	F-3
QR4503	F-3
QR4506	D-5
QR4507	D-3
QR4508	D-3
QR4509	E-4
QR4510	E-2
Integrated Circuit	
IC4501	E-2
IC4502	E-3
IC4503	E-3
IC4504	D-2
IC4505	D-3
IC4506	E-5
IC4507	F-4
IC4508	D-5
IC4509	E-3
IC4510	D-6
IC4511	E-6
IC4512	D-3
Test Point	
TP4507	D-6
TP4508	D-6
Adjustment	
VR4503	F-6
VR4504	D-6
VR4508	D-7
VR4801	B-3

ADDRESS INFORMATION


µPD4066BC
AN3312
TC9145P
NJ
DTA124EA
22K
22K
B
C
E
E C B
REC 0.3Vp-p
REC 0.6Vp-p
PLAY 0.2Vp-p
REC 0.2V
PLAY 0.25
REC/PLAY 0.3Vp-p
REC 0.9Vp-p
PLAY 0.6Vp-
(L.P.F)
LEVEL SENSOR
GND

VEP04124A, VEP04130A)



FL4501
FL4502
FL4503
IC4506
VEFA006
IC4508
VEFA006
IC4510
μPC1531HA
IC4511
AN3312
QR4506
DTA124EA
Q4510
2SB641(Q.R.S)
Q4516
2SD638(Q.R.S)
Q4517
2SD638(Q.R.S)
VR4503
VR4504
VR4508
TP4507
TP4508
TO CHASSIS EARTH
J1
J2
J3
J4
J5
J6
J7
J8
J9

P4502 (TO MAIN)

1	LINE OUT (R-CH)
2	GND
3	LINE OUT (L-CH)
4	LINE IN (L-CH)
5	GND
6	LINE IN (R CH)

P4501 (TO MAIN)

1	REG 12V
2	GND
3	LINE Ⓗ
4	MUTE LEVEL
5	AUDIO IN (NORMAL)
6	ENV. OUT
7	A.H. SW
8	FILTER Ⓗ
9	D REC 12V
10	REC 5V
11	MUTE Ⓗ
12	E-E Ⓗ
13	SLP Ⓗ
14	CURR EMPH Ⓛ
15	AUDIO OUT Ⓛ
16	REC MUTE Ⓛ
17	5V
18	REC MUTE Ⓗ

P4505 (TO CYLINDER)

1	R-CH
2	COM
3	L-CH
4	GND

P4802 (TO MAIN)

1	FM IN (L-CH)
2	FM IN (R-CH)
3	————
4	FM OUT (L-CH)
5	FM OUT (R-CH)

P4801 (TO TV DEMODULATOR)

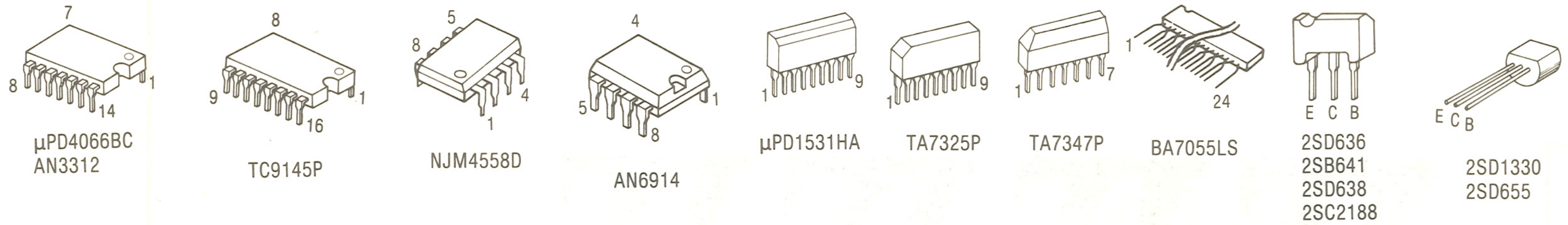
1	AUDIO IN
2	GND
3	REG 12V

5 6 7

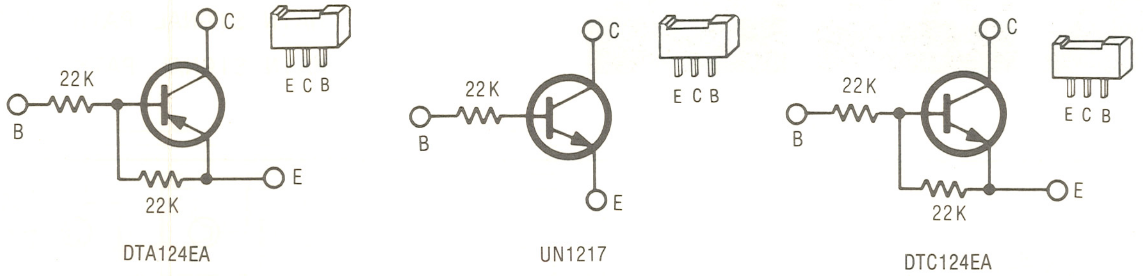
FM AUDIO & AUDIO INTERFACE CIRCUIT BOARD

Transistor	
Q4501	F-2
Q4502	F-2
Q4503	E-2
Q4504	E-2
Q4505	D-4
Q4506	D-3
Q4507	E-5
Q4508	F-3
Q4509	B-4
Q4510	D-6
Q4511	F-7
Q4512	F-7
Q4513	E-7
Q4514	E-7
Q4515	D-7
Q4516	D-6
Q4517	D-7
Q4518	F-6
Q4520	E-7
Q4521	E-7
Q4522	D-3
Q4523	E-4
Q4524	F-3
Q4525	E-5
Q4526	E-4
Q4527	E-5
Q4801	A-3
Q4802	A-4
Q4803	B-4
Q4804	B-3
Q4805	B-2
Q4806	B-3
Q4807	B-2
Q4808	B-4
Transistor & Resistor	
QR4501	E-3
QR4502	F-3
QR4503	F-3
QR4506	D-5
QR4507	D-3
QR4508	D-3
QR4509	E-4
QR4510	E-2
Integrated Circuit	
IC4501	E-2
IC4502	E-3
IC4503	E-3
IC4504	D-2
IC4505	D-3
IC4506	E-5
IC4507	F-4
IC4508	D-5
IC4509	E-3
IC4510	D-6
IC4511	E-6
IC4512	D-3
Test Point	
TP4507	D-6
TP4508	D-6
Adjustment	
VR4503	F-6
VR4504	D-6
VR4508	D-7
VR4801	B-3

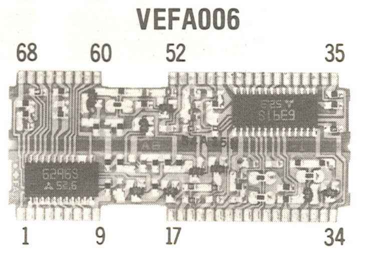
ADDRESS INFORMATION



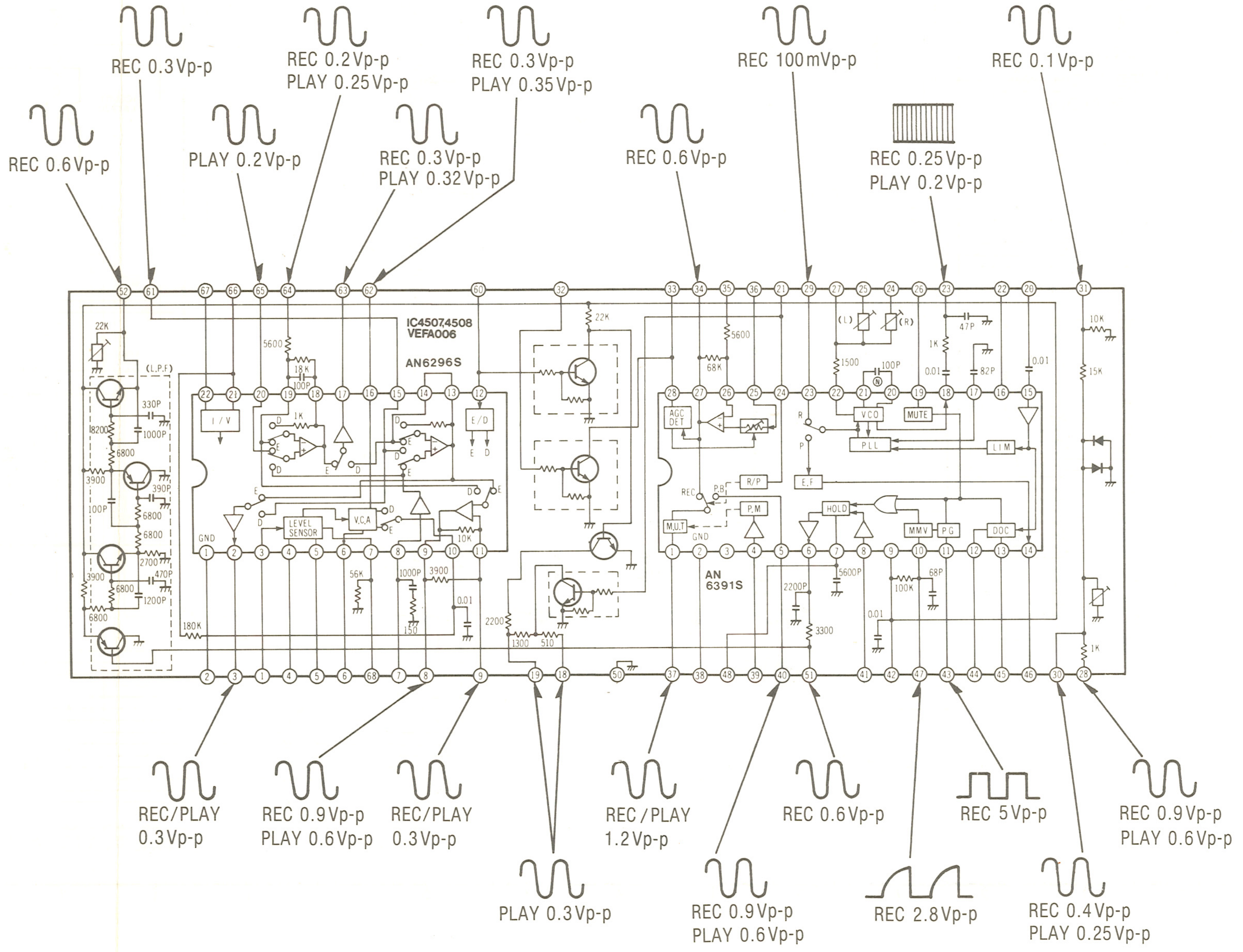
μPD4066BC
AN3312
TC9145P
NJM4558D
AN6914
μPD1531HA
TA7325P
TA7347P
BA7055LS
2SD636
2SB641
2SD638
2SC2188
2SD1330
2SD655
E C B



22K
22K
B
C
E
E C B
DTA124EA
UN1217
DTC124EA



VEFA006
68
60
52
35
1
9
17
34

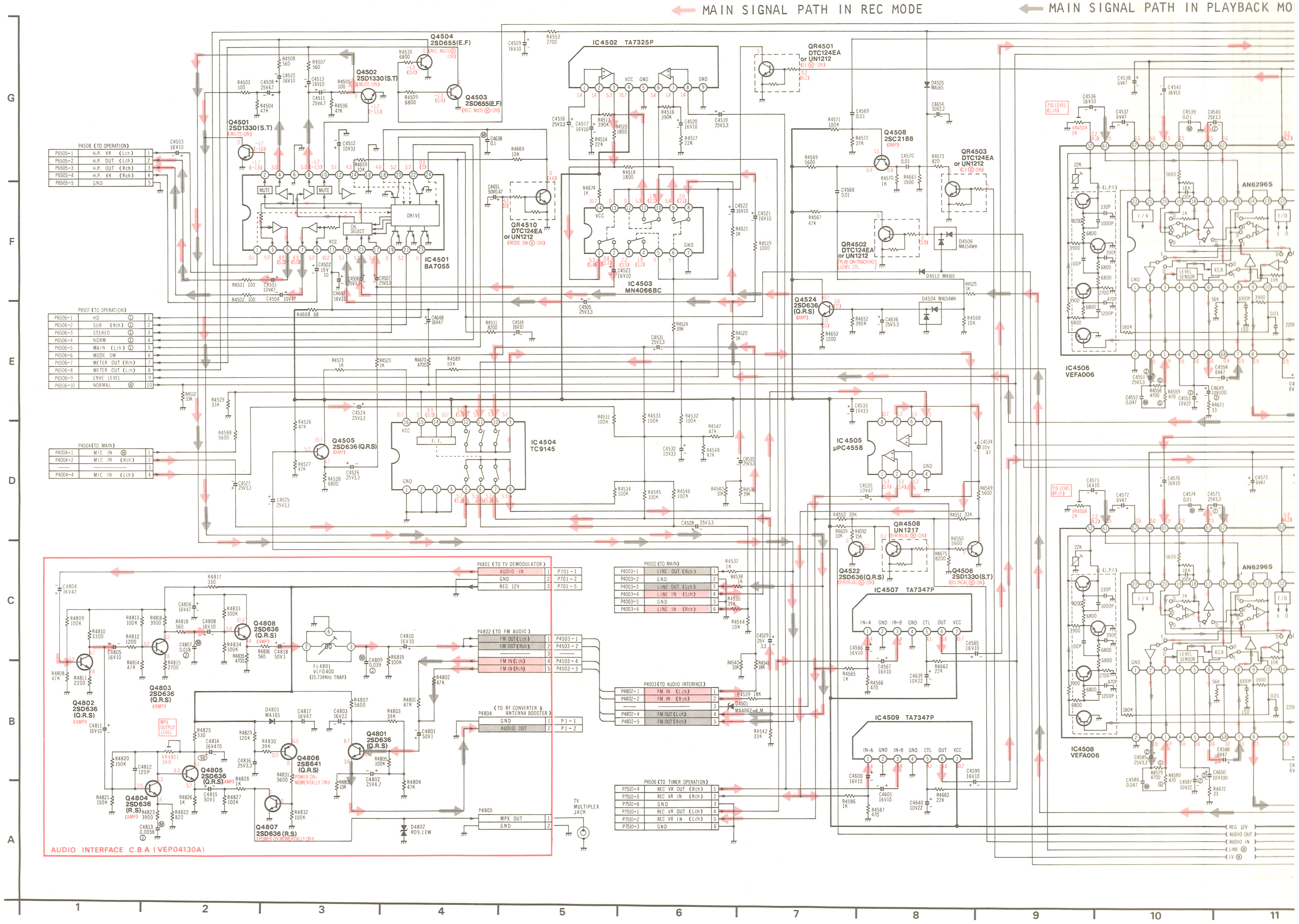


REC 0.3Vp-p
REC 0.2Vp-p
PLAY 0.25Vp-p
REC 0.3Vp-p
PLAY 0.35Vp-p
REC 100mVp-p
REC 0.1Vp-p
REC 0.6Vp-p
PLAY 0.2Vp-p
REC 0.3Vp-p
PLAY 0.32Vp-p
REC 0.6Vp-p
REC 0.25Vp-p
PLAY 0.2Vp-p
IC4507,4508
VEFA006
AN6296S
AN6391S
L.P.F
I/V
E/D
LEVEL SENSOR
V.C.A
AGC DET
VCO
MUTE
PLL
LIM
R/P
P.M
E.F
M.U.T
HOLD
MMV
P.G
DOC
GND
REC/PLAY
0.3Vp-p
REC 0.9Vp-p
PLAY 0.6Vp-p
REC/PLAY
0.3Vp-p
PLAY 0.3Vp-p
REC/PLAY
1.2Vp-p
REC 0.9Vp-p
PLAY 0.6Vp-p
REC 0.6Vp-p
REC 2.8Vp-p
REC 5Vp-p
REC 0.4Vp-p
PLAY 0.25Vp-p
REC 0.9Vp-p
PLAY 0.6Vp-p

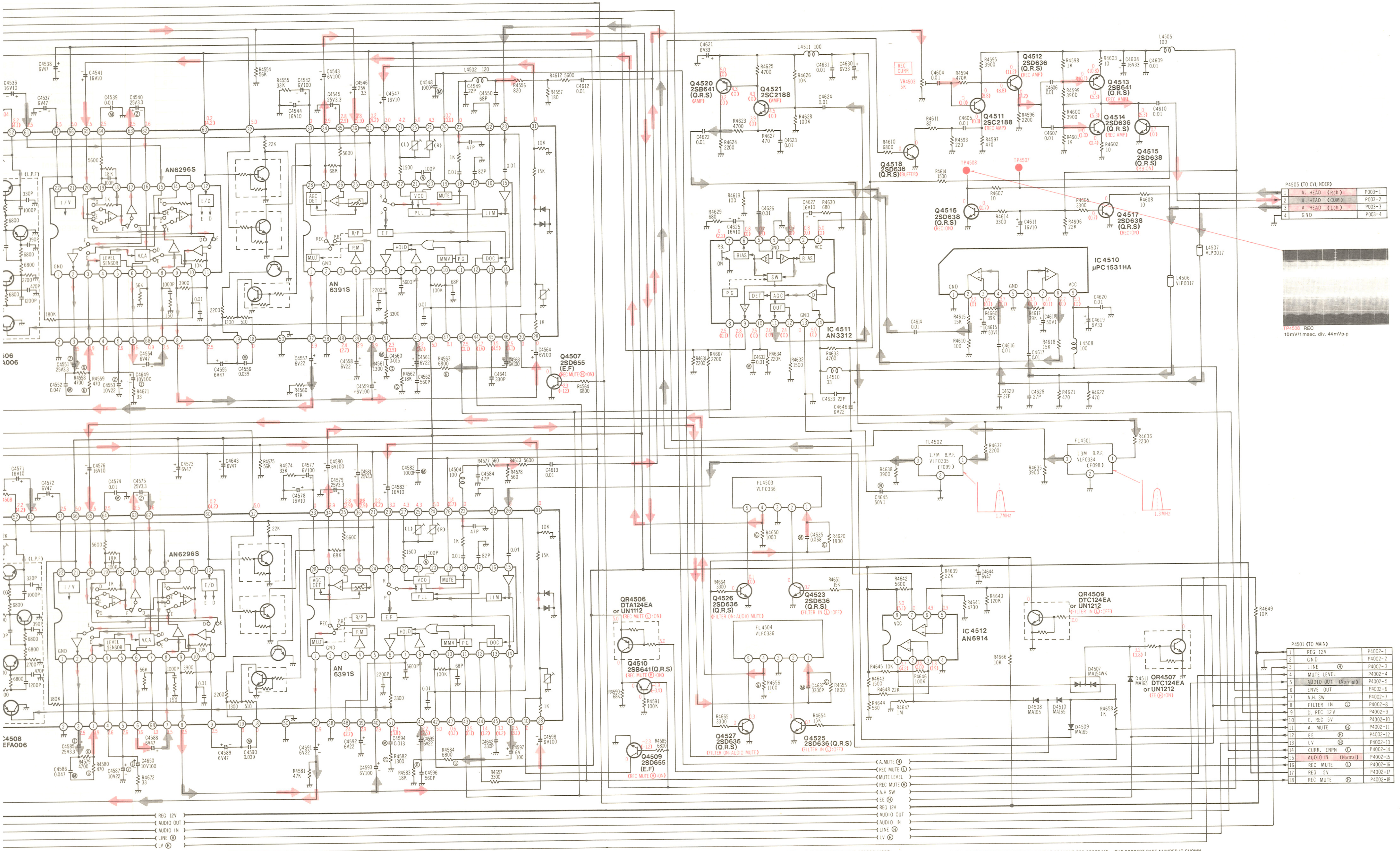
FM AUDIO & AUDIO INTERFACE SCHEMATIC	
Transistor	
Q4501	G-2
Q4502	G-3
Q4503	G-4
Q4504	G-4
Q4505	D-3
Q4506	C-8
Q4507	C-15
Q4508	G-8
Q4509	B-15
Q4510	B-15
Q4511	G-18
Q4512	G-18
Q4513	G-19
Q4514	G-19
Q4515	G-19
Q4516	F-17
Q4517	F-19
Q4518	G-17
Q4520	G-15
Q4521	G-16
Q4522	C-7
Q4523	C-16
Q4524	E-7
Q4525	B-16
Q4526	C-15
Q4527	B-15
Q4801	B-3
Q4802	B-1
Q4803	B-2
Q4804	A-2
Q4805	B-2
Q4806	B-3
Q4807	A-3
Q4808	C-2
Transistor & Resistor	
QR4501	G-7
QR4502	F-8
QR4503	G-8
QR4506	C-15
QR4507	C-19
QR4508	D-8
QR4509	C-18
QR4510	F-5
Integrated Circuit	
IC4501	F-4
IC4502	G-5
IC4503	F-6
IC4504	D-5
IC4505	D-7
IC4506	E-9
IC4507	C-8
IC4508	B-9
IC4509	B-8
IC4510	F-18
IC4511	E-16
IC4512	C-17
Test Point	
TP4507	G-18
TP4508	G-17
Adjustment	
VR4503	G-17
VR4504	G-9
VR4508	D-9
VR4801	B-2
Connector	
P4501	B-20
P4502	C-6
P4503	B-6
P4504	D-1
P4505	F-20
P4506	A-6
P4507	E-1
P4508	G-1
P4801	C-4
P4802	C-4
P4804	B-4
P4805	A-4

ADDRESS INFORMATION

3-21. FM AUDIO & AUDIO INTERFACE SCHEMATIC DIAGRAM


MAIN SIGNAL PATH IN REC MODE
MAIN SIGNAL PATH IN PLAYBACK MO
Q4504 2SD655(E.F)
Q4502 2SD1330(S.T)
Q4503 2SD655(E.F)
Q4501 2SD1330(S.T)
IC4502 TA7325P
QR4501 DTC124EA or UN1212
Q4508 2SC2188
QR4503 DTC124EA or UN1212
QR4510 DTC124EA or UN1212
IC4501 BA7055
IC4503 MN4066BC
QR4502 DTC124EA or UN1212
Q4524 2SD636(Q.R.S)
IC4506 VEFA006
AN6296S
P4508 (TO OPERATION)
P4507 (TO OPERATION)
P4504 (TO MAIN)
Q4505 2SD636(Q.R.S)
IC4504 TC9145
IC4505 μPC4558
QR4508 UN1217
Q4522 2SD636(Q.R.S)
Q4506 2SD1330(S.T)
IC4507 TA7347P
IC4509 TA7347P
IC4508 VEFA006
P4801 (TO TV DEMODULATOR)
P4802 (TO FM AUDIO)
P4804 (TO RF CONVERTER & ANTENNA BOOSTER)
P4805
P4502 (TO MAIN)
P4503 (TO AUDIO INTERFACE)
P4506 (TO TIMER OPERATION)
Q4808 2SD636 (Q.R.S)
Q4803 2SD636 (Q.R.S)
Q4802 2SD636 (Q.R.S)
Q4804 2SD636 (R.S)
Q4805 2SD636 (Q.R.S)
Q4806 2SB641 (Q.R.S)
Q4801 2SD636 (Q.R.S)
Q4807 2SD636 (R.S)
FL4801 VLF0400 (15.734KHz TRAP)
TV MULTIPLEX JACK
AUDIO INTERFACE C.B.A (VEP04130A)
G
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
10
11

SIGNAL PATH IN PLAYBACK MODE


AN6296S
AN6291S
AN6296S
AN6291S
IC 4511
AN3312
IC 4510
μPC1531HA
IC 4512
AN6914
Q4507
2SD655
(E.F)
REC MUTE Ⓗ ON
Q4509
2SD655
(E.F)
REC MUTE Ⓗ ON
Q4510
2SB641(Q.R.S)
REC MUTE Ⓗ ON
QR4506
DTA124EA
or UN1112
REC MUTE Ⓗ ON
QR4507
DTC124EA
or UN1212
EE Ⓗ ON
QR4509
DTC124EA
or UN1212
FILTER IN Ⓛ OFF
Q4511
2SC2188
REC AMP
Q4512
2SD636
(Q.R.S)
REC AMP
Q4513
2SB641
(Q.R.S)
REC AMP
Q4514
2SD636
(Q.R.S)
REC AMP
Q4515
2SD638
(Q.R.S)
REC ON
Q4516
2SD638
(Q.R.S)
REC ON
Q4517
2SD638
(Q.R.S)
REC ON
Q4518
2SD636
(Q.R.S) BUFFER
Q4520
2SB641
(Q.R.S)
AMP
Q4521
2SC2188
AMP
Q4523
2SD636
(Q.R.S)
FILTER IN Ⓛ OFF
Q4525
2SD636 (Q.R.S)
FILTER IN Ⓛ OFF
Q4526
2SD636
(Q.R.S)
FILTER ON AUDIO MUTE
Q4527
2SD636
(Q.R.S)
FILTER ON AUDIO MUTE
FL4501
1.3M B.P.F.
VLF0334
(F098)
FL4502
1.7M B.P.F.
VLF0335
(F099)
FL4503
VLF0336
FL4504
VLF0336
1.7MHz
1.3MHz
TP4508
TP4507
TP4508 REC
10mV/1msec. div. 44mVp-p
REC CURR
VR4503 5K
P4505 (TO CYLINDER)
1 A. HEAD (Rch) P003-1
2 A. HEAD (COM) P003-2
3 A. HEAD (Lch) P003-3
4 GND P003-4
P4501 (TO MAIN)
1 REG 12V P4002-1
2 GND P4002-2
3 LINE Ⓗ P4002-3
4 MUTE LEVEL P4002-4
5 AUDIO OUT (Normal) P4002-5
6 ENVE OUT P4002-6
7 A.H. SW P4002-7
8 FILTER IN Ⓛ P4002-8
9 D. REC 12V P4002-9
10 E. REC 5V P4002-10
11 A. MUTE Ⓗ P4002-11
12 EE Ⓗ P4002-12
13 LV Ⓗ P4002-13
14 CURR. ENPN Ⓛ P4002-14
15 AUDIO IN (Normal) P4002-15
16 REC MUTE Ⓛ P4002-16
17 REG 5V P4002-17
18 REC MUTE Ⓗ P4002-18
A.MUTE Ⓗ
REC MUTE Ⓛ
MUTE LEVEL
REC MUTE Ⓗ
A.H SW
EE Ⓗ
REG 12V
AUDIO OUT
AUDIO IN
LINE Ⓗ
LV Ⓗ
REG 12V
AUDIO OUT
AUDIO IN
LINE Ⓗ
LV Ⓗ

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS RECORD MODE WITH 1kHz, 0dB AUDIO SIGNAL.(SP Mode)
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH 1kHz, 0dB AUDIO SIGNAL.(SP Mode)

NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

10 11 12 13 14 15 16 17 18 19 20

AUDIO ICs VOLTAGE CHART

REF. NO.		IC4001								
MODE		1	2	3	4	5	6	7	8	9
SP	PLAY	1.4	1.4	5.4	10.9	0	5.4	1.4	1.3	0
	REC	1.4	1.4	5.4	10.9	0	5.4	1.4	1.4	0
LP	PLAY	1.3	1.4	5.4	10.9	0	5.4	1.4	1.3	0
	REC	1.3	1.4	5.4	10.9	0	5.4	1.4	1.3	0
SLP	PLAY	1.3	1.4	5.4	10.9	0	5.4	1.4	1.3	0
	REC	1.3	1.4	5.4	10.8	0	5.4	1.4	1.3	0

REF. NO.		IC4002															
MODE		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
SP	PLAY	2.5	2.5	0.6	2.5	0	0	5.0	1.3	0	2.8	2.4	2.8	2.7	2.8	5.0	0.5
	REC	2.5	0.1	0	0	0	0	0	2.5	3.2	2.1	3.2	2.0	3.2	2.0	0	0.5
LP	PLAY	2.5	2.5	0.6	2.5	0	0	4.9	1.6	0	3.6	2.4	3.5	2.4	3.4	5.0	0.5
	REC	2.5	0.1	0	0	0	0	0	3.2	—	9.5	9.1	9.6	9.1	3.1	0	0.5
SLP	PLAY	2.5	2.5	0.6	2.5	0	0	4.9	1.3	0	2.6	3.7	2.5	2.6	2.5	5.0	0.5
	REC	2.5	0.1	0	0	0	0	0	1.7	2.1	2.3	3.1	2.7	3.4	1.9	0	0.5

REF. NO.		IC4003								
MODE		1	2	3	4	5	6	7	8	9
SP	PLAY	0.8	0.8	10.7	10.7	0	5.0	0	10.7	1.0
	REC	0.8	0.8	10.7	10.7	0	5.0	0	10.7	1.0
LP	PLAY	0.8	0.8	10.7	10.7	0	5.0	0	10.7	1.0
	REC	0.8	0.8	10.7	10.7	0	5.0	0	10.7	1.0
SLP	PLAY	0.8	0.8	10.7	10.7	0	5.0	0	10.7	1.0
	REC	0.8	0.8	10.7	10.7	0	5.0	0	10.7	1.0

AUDIO TRANSISTORs VOLTAGE CHART

REF. NO.		Q4001			Q4002			Q4003		
MODE		E	C	B	E	C	B	E	C	B
SP	PLAY	10.7	11.8	11.5	0	0	−3.5	5.0	5.0	4.3
	REC	10.7	11.8	11.5	0	0	−2.3	5.0	0	5.6
LP	PLAY	10.7	11.8	11.4	0	0	−2.1	5.0	5.0	4.3
	REC	10.7	11.8	11.4	0	0	−2.2	5.0	0	5.5
SLP	PLAY	10.7	11.8	11.4	0	0	−2.2	5.0	5.0	4.3
	REC	10.7	11.8	11.4	0	0	−2.5	5.0	0	5.5

AUDIO PACK ICs VOLTAGE CHART

REF. NO.		IC401																	
MODE		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
SP	PLAY	10.7	5.1	5.3	5.3	5.3	5.3	0	0.1	5.3	5.3	5.0	5.3	0	5.3	5.0	5.0	0.2	5.3
	REC	10.7	5.1	5.3	5.3	5.3	5.3	0	0.1	5.3	5.3	5.0	5.3	0.8	5.3	5.1	5.0	3.9	5.3
LP	PLAY	10.7	5.1	5.3	5.3	5.3	5.3	0	0.1	5.3	5.3	5.0	5.3	0	5.3	5.0	5.0	0.2	5.3
	REC	10.7	5.1	5.3	5.3	5.3	5.3	0	0.1	5.3	5.3	5.0	5.3	0.8	5.3	5.0	5.0	3.9	5.3
SLP	PLAY	10.7	5.1	5.3	5.3	5.3	5.3	0	0.1	5.3	5.3	5.0	5.3	0	5.3	5.0	5.0	0.2	5.3
	REC	10.7	5.1	5.3	5.3	5.3	5.3	0	0.1	5.3	5.3	5.0	5.3	0.8	5.3	5.0	5.0	3.9	5.3

REF. NO.		IC402						
MODE		1	2	3	4	5	6	7
SP	PLAY	0	0	0	0	0.2	10.7	4.5
	REC	0.8	0	0	0	3.9	10.7	0
LP	PLAY	0	0	0	0	0.2	10.7	4.5
	REC	0.8	0	0	0	3.9	10.7	0
SLP	PLAY	0	0	0	0	0.2	10.7	4.5
	REC	0.8	0	0	0	3.9	10.7	0

AUDIO PACK TRANSISTORs VOLTAGE CHART

REF. NO.		Q401			Q402			Q403			Q404			Q405			Q406		
MODE		E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
SP	PLAY	0	0	0	0	0	0.1	0	0	0.1	0	0	0	0	0	0	0	0	0
	REC	0	10.8	−0.9	0	0.1	0.1	0	0.1	0.1	0	0.1	0.1	0	0	0	0	0	0
LP	PLAY	0	0	0	0	0	0.2	0	0.1	0.2	0	0	0.7	0	0	0.7	0	0	0.7
	REC	0	10.8	−0.9	0	0.1	0.2	0	0.1	0.2	0	0	0.7	0	0	0.7	0	0	0.7
SLP	PLAY	0	0	0	0	0	0.7	0	0	0.7	0	0	0.7	0	0	0.7	0	0	0.7
	REC	0	10.8	−0.9	0	0	0.7	0	0	0.7	0	0	0.7	0	0	0.7	0	0	0.7

Back Page:
FM AUDIO & AUDIO INTERFACE Section

AUDIO PACK VOLTAGE CHART

REF. NO.		AUDIO PACK																			
MODE		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
SP	PLAY	0	0	0	0	0	4.5	0	5.3	0.2	10.7	0.1	0	0							0
	REC	11.3	0	4.9	30.6	0.7	0.1	0	5.3	4.3	10.7	0.1	0	0							0.1
LP	PLAY	0	0	0	0	0	4.5	0	5.3	0.2	10.7	0.2	0	0							3.8
	REC	11.3	0	4.9	30.8	0.9	0.1	0	5.3	4.3	10.7	0.2	0	0							3.8
SLP	PLAY	0	0	0	0	0	4.5	0	5.3	0.2	10.7	4.0	0	0							3.9
	REC	11.3	0	4.9	42.4	0.8	0.1	0	5.3	4.3	10.7	4.0	0	0							3.9

REF. NO.		AUDIO PACK			
MODE		21	22	23	24
SP	PLAY	0.1	0	0	0
	REC	0.1	0	0	0
LP	PLAY	0.1	0	0	0
	REC	0.1	0	0	0
SLP	PLAY	0.1	0	0	0
	REC	0.1	0	0	0

AUDIO MUTE PACK TRANSISTORs VOLTAGE CHART

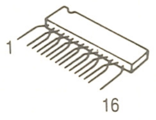
REF. NO.		Q2013			Q2014		
MODE		E	C	B	E	C	B
SP	PLAY	0.1	5.0	0.2	0	5.0	0.2
	REC	2.5	5.0	2.3	0	5.0	0
LP	PLAY	0.1	5.0	0.2	0	5.0	0.2
	REC	2.5	5.0	2.3	0	5.0	0
SLP	PLAY	0.1	5.0	0.2	0	5.0	0.2
	REC	2.5	5.0	2.3	0	5.0	0

REF. NO.		QR2015			QR2016		
MODE		E	C	B	E	C	B
SP	PLAY	0	0.3	0.1	5.0	0.1	5.0
	REC	0	0	2.4	5.0	0.1	5.0
LP	PLAY	0	0.3	0.1	5.0	0.1	5.0
	REC	0	0	2.5	5.0	0.1	5.0
SLP	PLAY	0	0.3	0.1	5.0	0.1	5.0
	REC	0	0	2.5	5.0	0.1	5.0

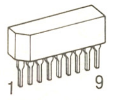
AUDIO MUTE PACK VOLTAGE CHART

REF. NO.		AUDIO MUTE PACK						
MODE		1	2	3	4	5	6	7
SP	PLAY	0	5.0	0.5	0.2	0.1	0.2	5.0
	REC	0	0	0.5	2.3	0.1	4.3	5.0
LP	PLAY	0	5.0	0.5	0.2	0.1	0.2	5.0
	REC	0	0	0.5	2.3	0.1	4.3	5.0
SLP	PLAY	0	5.0	0.5	0.2	0.1	0.2	5.0
	REC	0	0	0.5	2.3	0.1	4.3	5.0

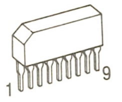
ICs & TRANSISTORs INFORMATION



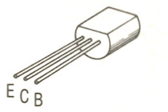
BA6323L



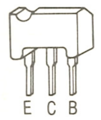
AN6262N



TA7325P



2SD655



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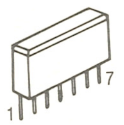
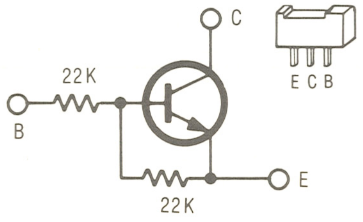
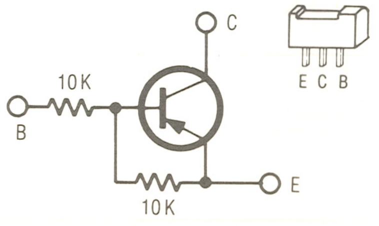
2SB643
2SD636



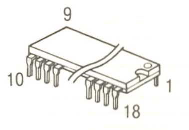
µPC1519HA



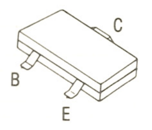
DTC124A



DTA114A



µPC1514CA



2SD601

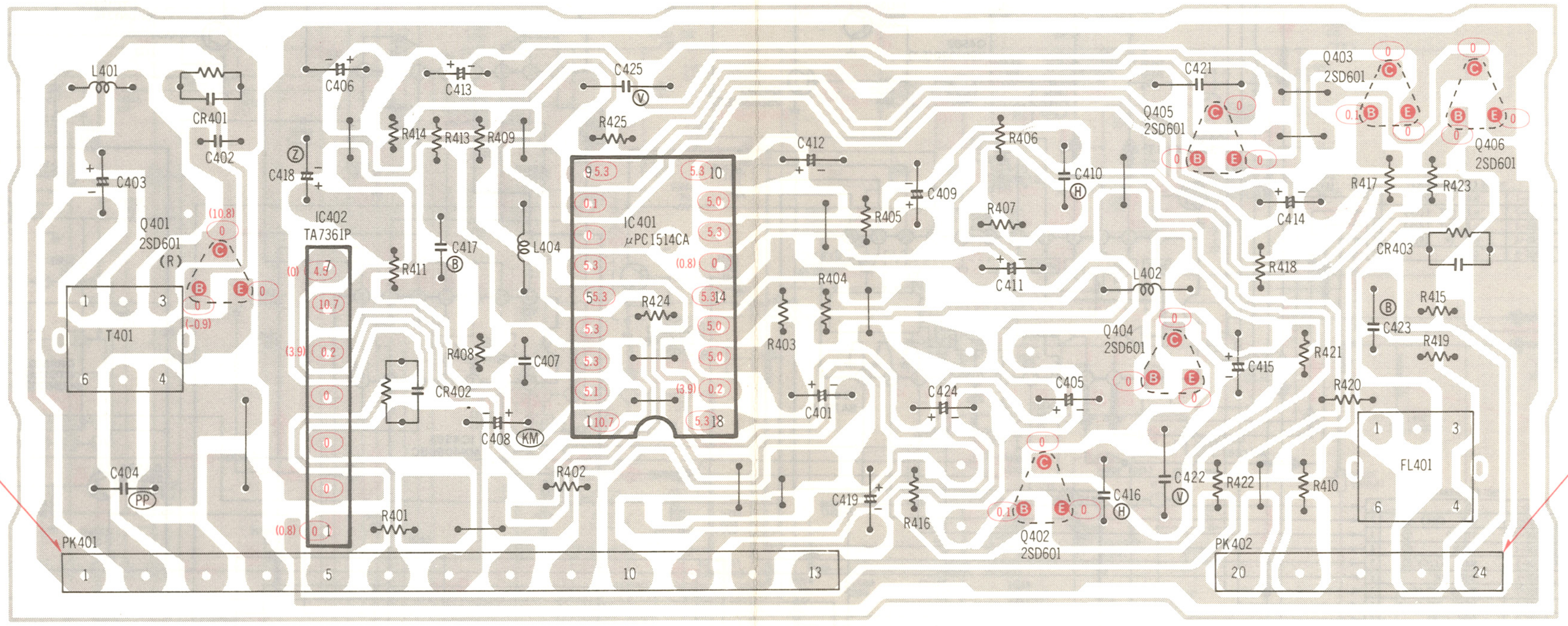
AUDIO CIRCUIT BOARD	
Transistor	
Q4001	E-12
Q4002	E-10
Q4003	E-9
Integrated Circuit	
IC4001	E-6
IC4002	E-8
IC4003	E-10
Test Point	
TP4002	E-10
TP4003	E-10
TP4511	E-8
TP4516	F-9
Adjustment	
VR4001	E-11
VR4002	E-10
VR4505	E-8
VR4510	E-9

ADDRESS INFORMATION

3-22. AUDIO PACK CIRCUIT BOARD (VEP04125)

PK401

1	D.REC 12V
2	GND (OSC)
3	A.ERASE
4	BIAS GAIN
5	A.HEAD (R)
6	E.REC Ⓗ
7	A.HEAD (P)
8	AUTO SEARCH
9	EE Ⓗ
10	REG 12V
11	SLP Ⓗ
12	PB GAIN
13	REC MUTE


L401
CR401
C402
C406
C413
C425
C421
Q403
2SD601
Q405
2SD601
Q406
2SD601
C403
Q401
2SD601
(R)
C418
IC402
TA7361P
R414
R413
R409
R425
R411
C417
L404
IC401
μPC1514CA
C412
R406
C409
C410
R405
R407
C411
C414
R417
R423
R418
CR403
R415
C423
R419
T401
R408
CR402
C407
R424
R404
R403
L402
Q404
2SD601
C415
R421
R420
C405
C401
C424
C408
FL401
C404
R402
R401
C419
R416
Q402
2SD601
C416
C422
R422
R410
PK401
PK402
1
5
10
13
20
24

PK402

20	LP/SLP Ⓗ
21	A.MUTE Ⓗ
22	GND (MAIN)
23	AUDIO OUT
24	AUDIO IN

AUDIO SCHEMATIC	
Transistor	
Q401	G-4
Q402	G-6
Q403	D-5
Q404	G-7
Q405	D-6
Q406	E-6
Q2013	F-9
Q2014	F-7
Q4001	D-3
Q4002	C-6
Q4003	B-8
Transistor & Resistor	
QR2015	F-8
QR2016	G-8
Integrated Circuit	
IC401	F-6
IC402	G-4
IC4001	G-2
IC4002	D-9
IC4003	D-8
Test Point	
TP4002	C-5
TP4003	C-5
TP4511	E-8
TP4516	B-2
Adjustment	
VR4001	C-5
VR4002	C-4
VR4505	B-4
VR4510	D-8
Connector	
P4001	C-10
P4002	B-1
P4003	G-10
P4004	D-1

ADDRESS INFORMATION

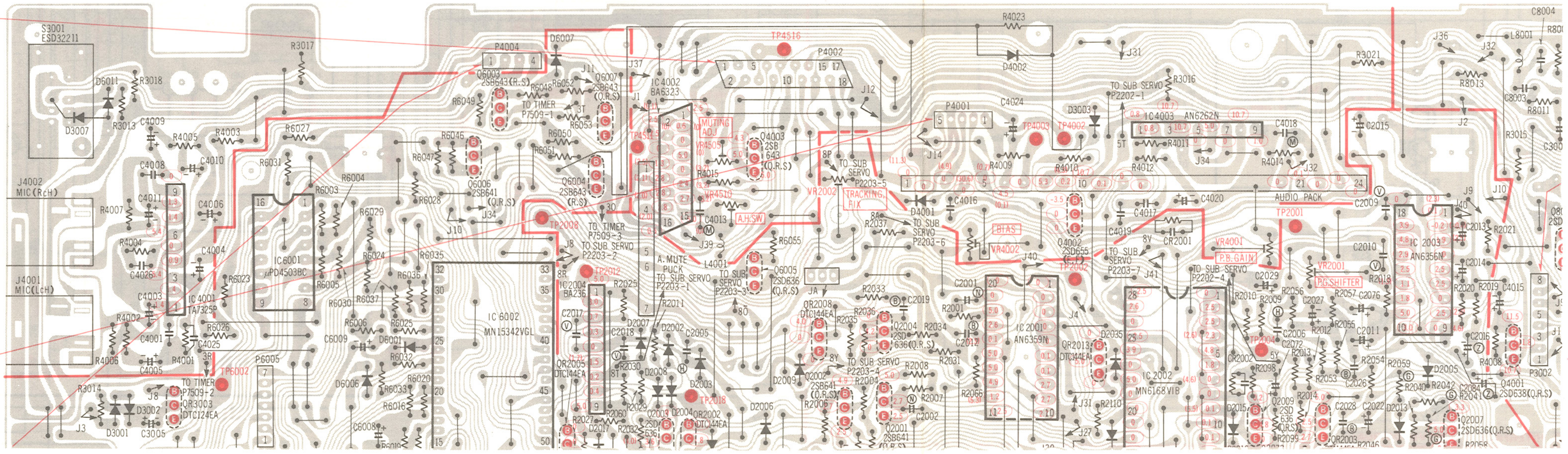
3-23. AUDIO Section in Main Circuit Board & AUDIO MUTE PACK CIRCUIT BOARD (VEP03276A1, VEP00E45A)

P4002 (TO FM AUDIO)

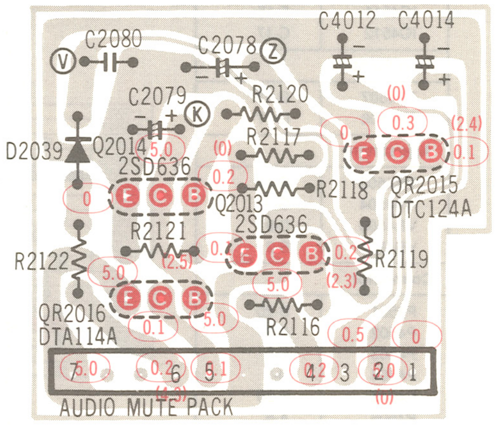
1	REG 12V
2	GND
3	LINE Ⓗ
4	MUTE LEVEL
5	AUDIO IN (NORMAL)
6	ENV. OUT
7	A.H. SW
8	FILTER IN Ⓛ
9	D. REC 12V
10	REC 5V
11	MUTE Ⓗ
12	E.E Ⓗ
13	SLP Ⓗ
14	CURR EMPH
15	AUDIO OUT (NORMAL)
16	REC MUTE Ⓛ
17	REC 5V
18	REC MUTE Ⓗ

P4001 (TO A/C HEAD)

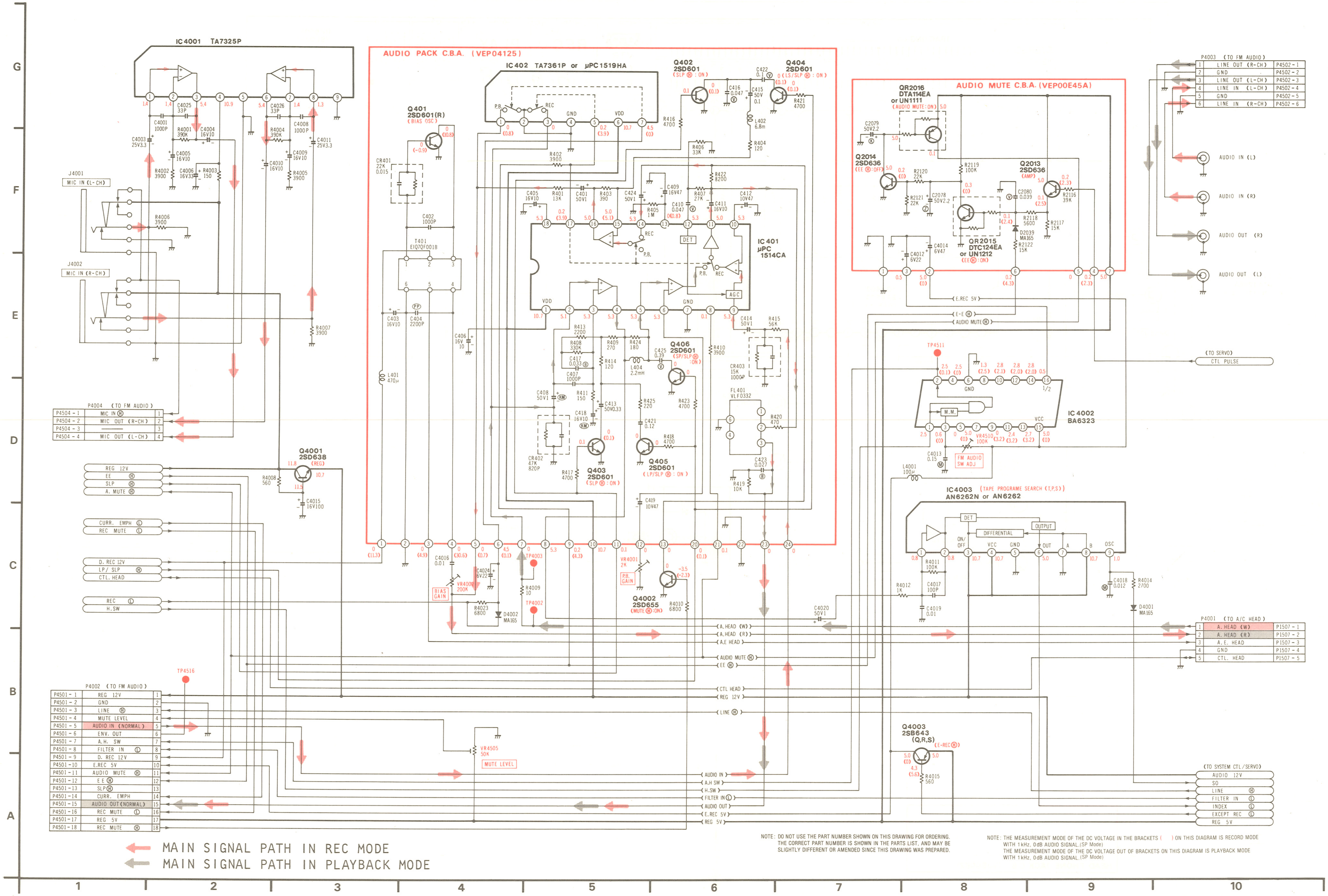
1	A. HEAD (W)
2	A. HEAD (R)
3	A.E HEAD
4	GND
5	CTL HEAD


S3001
ESD32211
J4002
MIC(RcH)
J4001
MIC(LcH)
IC4001
TA7325P
IC6001
μPD4503BC
IC6002
MN15342VGL
IC4002
BA6323
IC4003
AN6262N
IC2001
AN6359N
IC2002
MN6168VIB
IC2003
AN6356N
P4004
P4002
P4001
P6005
TP4516
TP4002
TP4003
TP2001
VR4002
VR4001
VR2001
TO TIMER
TO SUB SERVO
AUDIO PACK
A.MUTE
PUCK
TRACKING FIX
BIAS
PB GAIN
PG SHIFTER
L4001
J31
J32
J34
J36
C8004
R4023

AUDIO MUTE PACK C. BOARD (VEP00E45A)


C2080
C2078
C4012
C4014
C2079
R2120
R2117
R2118
D2039
Q2014
2SD636
Q2013
2SD636
QR2015
DTC124A
R2121
R2122
R2119
QR2016
DTA114A
R2116
E
C
B
7
6
5
4
3
2
1
AUDIO MUTE PACK

3-24. AUDIO & AUDIO MUTE PACK SCHEMATIC DIAGRAM

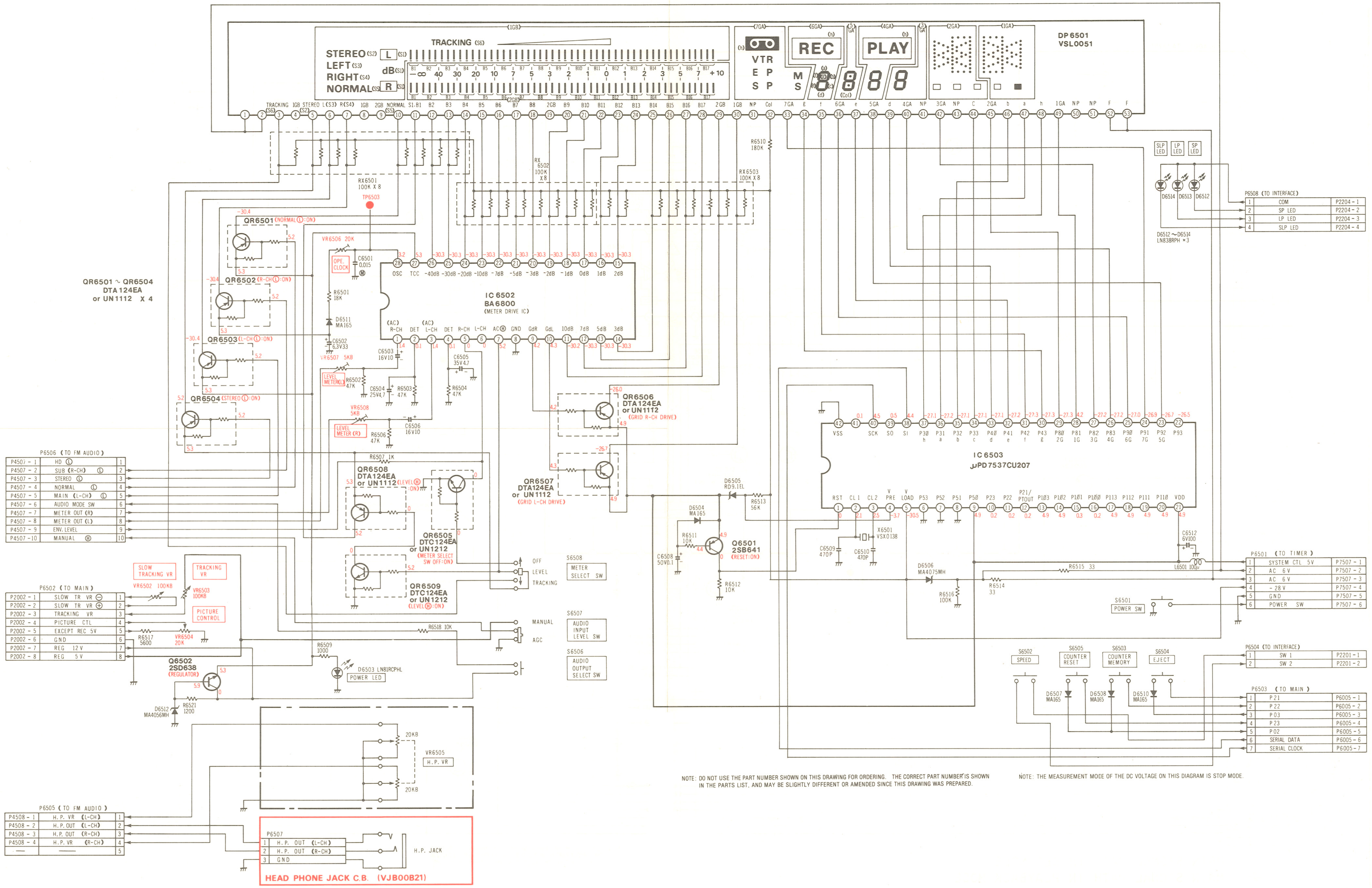


IC4001 TA7325P
AUDIO PACK C.B.A. (VEP04125)
IC402 TA7361P or μPC1519HA
Q401 2SD601(R) (BIAS OSC)
Q402 2SD601 (SLP Ⓗ : ON)
Q404 2SD601 (LS/SLP Ⓗ : ON)
IC401 μPC 1514CA
Q406 2SD601 (SP/SLP Ⓗ : ON)
Q403 2SD601 (SLP Ⓗ : ON)
Q405 2SD601 (LP/SLP Ⓗ : ON)
Q4001 2SD638 (REG)
Q4002 2SD655 (MUTE Ⓗ : ON)
T401 EIQ7QF001B
FL401 VLF0332
VR4001 2K PB GAIN
VR4002 200K BIAS GAIN
TP4003
TP4002
TP4516
TP4511
J4001 MIC IN (L-CH)
J4002 MIC IN (R-CH)
AUDIO MUTE C.B.A. (VEP00E45A)
QR2016 DTA114EA or UN1111 (AUDIO MUTE : ON)
Q2014 2SD636 (EE Ⓗ : OFF)
Q2013 2SD636 (AMP)
QR2015 DTC124EA or UN1212 (EE Ⓗ : ON)
IC4002 BA6323
FM AUDIO SW ADJ.
IC4003 AN6262N or AN6262 (TAPE PROGRAME SEARCH (T.P.S))
DET
DIFFERENTIAL
OUTPUT
Q4003 2SB643 (Q,R,S) (EE-REC Ⓗ)
VR4505 50K MUTE LEVEL
P4003 (TO FM AUDIO)
LINE OUT (R-CH) P4502-1
GND P4502-2
LINE OUT (L-CH) P4502-3
LINE IN (L-CH) P4502-4
GND P4502-5
LINE IN (R-CH) P4502-6
AUDIO IN (L)
AUDIO IN (R)
AUDIO OUT (R)
AUDIO OUT (L)
(TO SERVO) CTL PULSE
P4004 (TO FM AUDIO)
P4504-1 MIC IN Ⓗ
P4504-2 MIC OUT (R-CH)
P4504-3
P4504-4 MIC OUT (L-CH)
REG 12V
EE Ⓗ
SLP Ⓗ
A. MUTE Ⓗ
CURR. EMPH Ⓛ
REC MUTE Ⓛ
D. REC 12V
LP/SLP Ⓗ
CTL. HEAD
REC Ⓛ
H.SW
P4001 (TO A/C HEAD)
A. HEAD (W) P1507-1
A. HEAD (R) P1507-2
A. E. HEAD P1507-3
GND P1507-4
CTL. HEAD P1507-5
P4002 (TO FM AUDIO)
P4501-1 REG 12V
P4501-2 GND
P4501-3 LINE Ⓗ
P4501-4 MUTE LEVEL
P4501-5 AUDIO IN (NORMAL)
P4501-6 ENV. OUT
P4501-7 A.H. SW
P4501-8 FILTER IN Ⓛ
P4501-9 D. REC 12V
P4501-10 E.REC 5V
P4501-11 AUDIO MUTE Ⓗ
P4501-12 E E Ⓗ
P4501-13 SLP Ⓗ
P4501-14 CURR. EMPH
P4501-15 AUDIO OUT (NORMAL)
P4501-16 REC MUTE Ⓛ
P4501-17 REG 5V
P4501-18 REC MUTE Ⓛ
(TO SYSTEM CTL/SERVO)
AUDIO 12V
SO
LINE Ⓗ
FILTER IN Ⓛ
INDEX Ⓛ
EXCEPT REC Ⓛ
REG 5V
MAIN SIGNAL PATH IN REC MODE
MAIN SIGNAL PATH IN PLAYBACK MODE
G
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
10

NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS (   ) ON THIS DIAGRAM IS RECORD MODE WITH 1kHz, 0dB AUDIO SIGNAL.(SP Mode)
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH 1kHz, 0dB AUDIO SIGNAL.(SP Mode)

3-25. OPERATION SCHEMATIC DIAGRAM

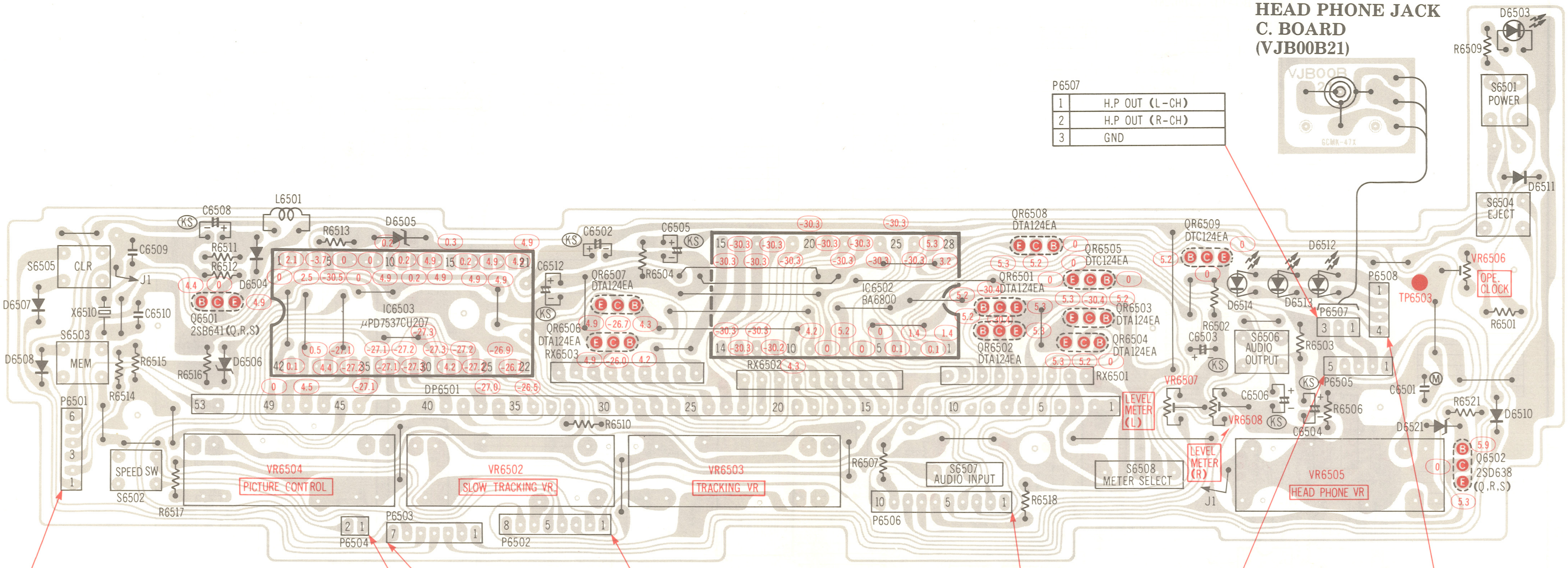

DP6501
VSL0051
STEREO (S2)
LEFT (S3)
RIGHT (S4)
NORMAL (S5)
TRACKING (S6)
dB (S1)
REC
PLAY
VTR
E P
S P
M S
IC6502
BA6800
(METER DRIVE IC)
IC6503
μPD7537CU207
QR6501 ~ QR6504
DTA124EA
or UN1112 × 4
QR6501 (NORMAL Ⓛ:ON)
QR6502 (R-CH Ⓛ:ON)
QR6503 (L-CH Ⓛ:ON)
QR6504 (STEREO Ⓛ:ON)
QR6505
DTC124EA
or UN1212
(METER SELECT SW OFF:ON)
QR6506
DTA124EA
or UN1112
(GRID R-CH DRIVE)
QR6507
DTA124EA
or UN1112
(GRID L-CH DRIVE)
QR6508
DTA124EA
or UN1112 (LEVEL Ⓗ:ON)
QR6509
DTC124EA
or UN1212
(LEVEL Ⓗ:ON)
Q6501
2SB641
(RESET:ON)
Q6502
2SD638
(REGULATOR)
RX6501 100K × 8
RX6502 100K × 8
RX6503 100K × 8
TP6503
VR6506 20K
OPE. CLOCK
VR6507 5KB
LEVEL METER(L)
VR6508 5KB
LEVEL METER (R)
SLOW TRACKING VR
VR6502 100KB
TRACKING VR
VR6503 100KB
PICTURE CONTROL
VR6504 20K
VR6505
H.P. VR
20KB
D6503 LN81RCPHL
POWER LED
D6512 ~ D6514
LN83BRPH × 3
SLP LED
LP LED
SP LED
S6508 METER SELECT SW
OFF
LEVEL
TRACKING
S6507 AUDIO INPUT LEVEL SW
MANUAL
AGC
S6506 AUDIO OUTPUT SELECT SW
S6501 POWER SW
S6502 SPEED
S6505 COUNTER RESET
S6503 COUNTER MEMORY
S6504 EJECT
X6501 VSX0138
L6501 100μ
P6506 (TO FM AUDIO)
P4507 - 1 HD Ⓛ 1
P4507 - 2 SUB (R-CH) Ⓛ 2
P4507 - 3 STEREO Ⓛ 3
P4507 - 4 NORMAL Ⓛ 4
P4507 - 5 MAIN (L-CH) Ⓛ 5
P4507 - 6 AUDIO MODE SW 6
P4507 - 7 METER OUT (R) 7
P4507 - 8 METER OUT (L) 8
P4507 - 9 ENV. LEVEL 9
P4507 - 10 MANUAL Ⓗ 10
P6502 (TO MAIN)
P2002 - 1 SLOW TR VR ⊖ 1
P2002 - 2 SLOW TR VR ⊕ 2
P2002 - 3 TRACKING VR 3
P2002 - 4 PICTURE CTL 4
P2002 - 5 EXCEPT REC 5V 5
P2002 - 6 GND 6
P2002 - 7 REG 12V 7
P2002 - 8 REG 5V 8
P6505 (TO FM AUDIO)
P4508 - 1 H.P. VR (L-CH) 1
P4508 - 2 H.P. OUT (L-CH) 2
P4508 - 3 H.P. OUT (R-CH) 3
P4508 - 4 H.P. VR (R-CH) 4
— 5
P6507
1 H.P. OUT (L-CH)
2 H.P. OUT (R-CH)
3 GND
H.P. JACK
HEAD PHONE JACK C.B. (VJB00B21)
P6508 (TO INTERFACE)
1 COM P2204 - 1
2 SP LED P2204 - 2
3 LP LED P2204 - 3
4 SLP LED P2204 - 4
P6501 (TO TIMER)
1 SYSTEM CTL 5V P7507 - 1
2 AC 6V P7507 - 2
3 AC 6V P7507 - 3
4 - 28V P7507 - 4
5 GND P7507 - 5
6 POWER SW P7507 - 6
P6504 (TO INTERFACE)
1 SW 1 P2201 - 1
2 SW 2 P2201 - 2
P6503 (TO MAIN)
1 P21 P6005 - 1
2 P22 P6005 - 2
3 P03 P6005 - 3
4 P23 P6005 - 4
5 P02 P6005 - 5
6 SERIAL DATA P6005 - 6
7 SERIAL CLOCK P6005 - 7

NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

Back Page:
AUDIO & AUDIO MUTE PACK Section

3-26. OPERATION CIRCUIT BOARD (VEP06298A)


HEAD PHONE JACK
C. BOARD
(VJB00B21)
P6507
1 H.P OUT (L-CH)
2 H.P OUT (R-CH)
3 GND
D6503
R6509
S6501 POWER
D6511
S6504 EJECT
S6505 CLR
D6507
X6510
S6503
D6508 MEM
C6508
L6501
R6513
D6505
C6509
R6511
R6512
D6504
Q6501 2SB641(Q.R.S)
C6510
R6515
R6516
D6506
R6514
P6501
IC6503 µPD7537CU207
C6512
QR6507 DTA124EA
R6504
C6502
C6505
QR6506 DTA124EA
RX6503
IC6502 BA6800
RX6502
QR6508 DTA124EA
QR6505 DTC124EA
QR6501 DTA124EA
QR6503 DTA124EA
QR6502 DTA124EA
QR6504 DTA124EA
QR6509 DTC124EA
RX6501
D6512
D6514
D6513
R6502
C6503
S6506 AUDIO OUTPUT
R6503
P6508
TP6503
VR6506 OPE. CLOCK
R6501
DP6501
R6510
VR6507
LEVEL METER (L)
C6506
VR6508
P6505
R6506
C6504
C6501
R6521
D6510
D6521
Q6502 2SD638 (Q.R.S)
SPEED SW
S6502
R6517
VR6504 PICTURE CONTROL
VR6502 SLOW TRACKING VR
VR6503 TRACKING VR
R6507
S6507 AUDIO INPUT
S6508 METER SELECT
LEVEL METER (R)
J1
VR6505 HEAD PHONE VR
R6518
P6506
P6504
P6503
P6502

P6501 (TO TIMER)

1	SYSTEM CTL 5V
2	AC 6V
3	AC 6V
4	REG -28V
5	(GND)
6	POWER SW

P6504 (TO INTERFACE)

1	SW 1
2	SW 2

P6503 (TO MAIN)

1	P21
2	P22
3	P03
4	P23
5	P02
6	SERIAL DATA
7	SERIAL CLOCK

P6502 (TO MAIN)

1	SLOW TRACKING VR ⊖
2	SLOW TRACKING VR ⊕
3	TRACKING VR
4	PICTURE CTL
5	E.REC 5V
6	GND
7	REG 12V
8	REG 5V

P6506 (TO FM AUDIO)

1	H.D Ⓛ
2	SUB (R-CH) Ⓛ
3	STEREO Ⓛ
4	NORM Ⓛ
5	MAIN (L-CH) Ⓛ
6	MODE SW
7	METER OUT (R)
8	METER OUT (L)
9	ENV. LEVEL
10	MANUAL Ⓗ

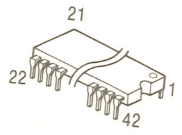
P6505 (TO FM AUDIO)

1	H.P. VR (L-CH)
2	H.P. OUT (L-CH)
3	H.P. OUT (R-CH)
4	H.P. VR (R-CH)
5	———

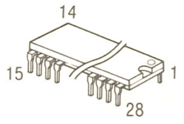
P6508 (TO INTERFACE)

1	COM
2	SP
3	LP
4	SLP

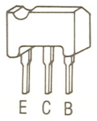
ICs & TRANSISTORs INFORMATION



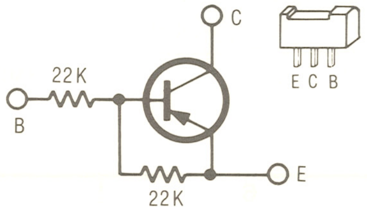
µPD7537CU207



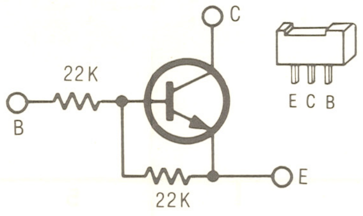
BA6800



2SD638
2SB641

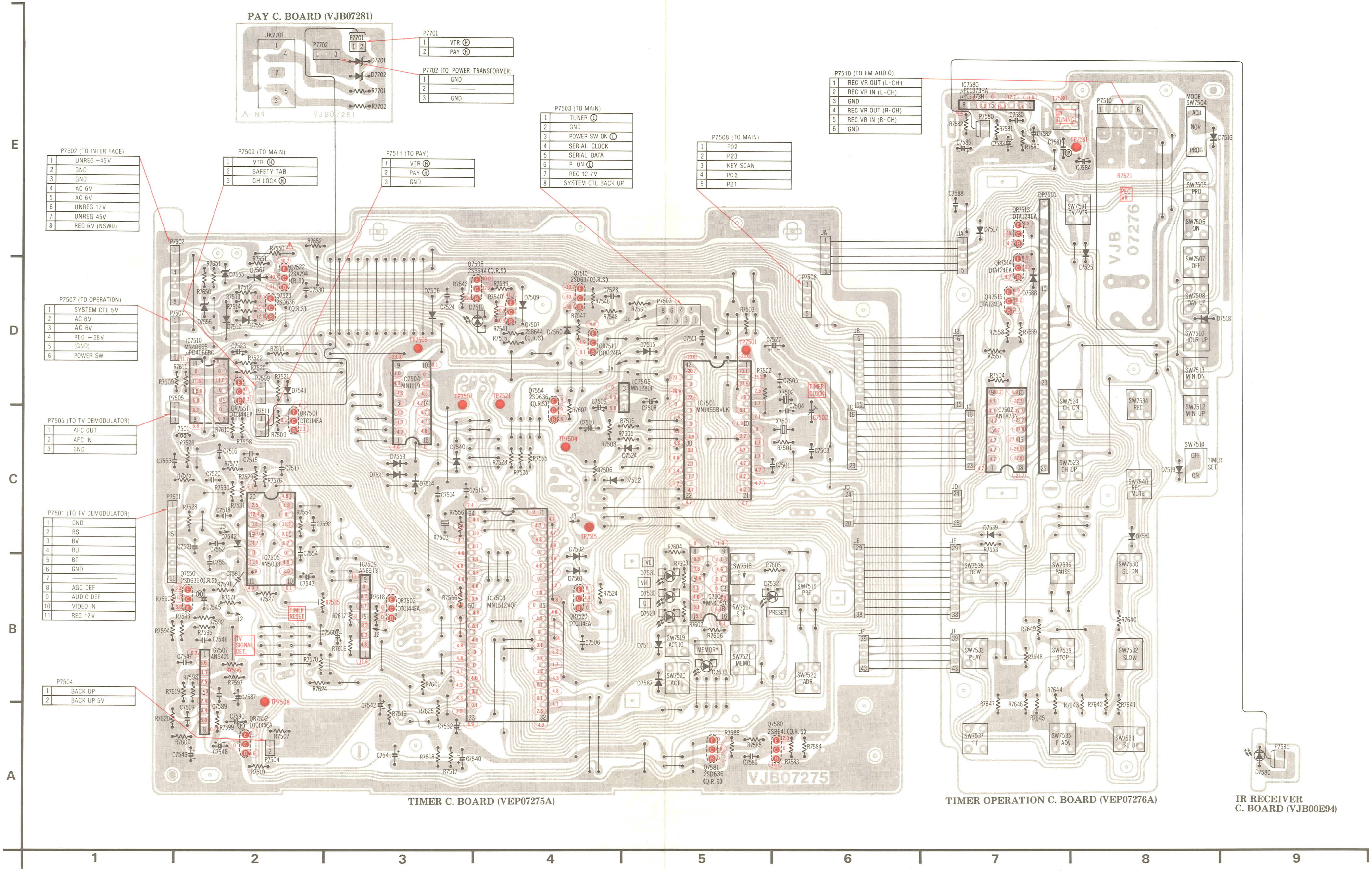

C
22K
B
E
22K
E C B

DTA124EA


C
22K
B
E
22K
E C B

DTC124EA

3-27. TIMER & TIMER OPERATION CIRCUIT BOARD (VEP07275A, VEP07276A)


PAY C. BOARD (VJB07281)
JK7701
P7701
P7702
D7701
D7702
R7701
R7702
A-N4
VJB07281
TIMER C. BOARD (VEP07275A)
VJB07275
IC7501 MN1455BVLK
IC7502 AN6873N
IC7503 MN1512VQF
IC7504 MN1215
IC7505 AN5033
IC7506 MN1280P
IC7507 AN5421
IC7508 MN4050
IC7509 AN6913
IC7510 MN4066B / PD4066BC
TIMER CLOCK
TIMER RESET
TV SIGNAL DET.
MEMORY
PRESET
TP7501
TP7504
TP7505
TP7507
TP7508
TP7515
TP7521
TIMER OPERATION C. BOARD (VEP07276A)
VJB 07276
IC7580 μPC1373HA / μPC1373H
IR TUNING
REC VR
MODE SW7504
ADJ
NOR
PROG
TIMER SET
OFF
ON
IR RECEIVER C. BOARD (VJB00E94)
D7580
P7580
E
D
C
B
A
1
2
3
4
5
6
7
8
9

P7502 (TO INTER FACE)

1	UNREG −45V
2	GND
3	GND
4	AC 6V
5	AC 6V
6	UNREG 17V
7	UNREG 45V
8	REG 6V (NSWD)

P7509 (TO MAIN)

1	VTR Ⓗ
2	SAFETY TAB
3	CH LOCK Ⓗ

P7511 (TO PAY)

1	VTR Ⓗ
2	PAY Ⓗ
3	GND

P7701

1	VTR Ⓗ
2	PAY Ⓗ

P7702 (TO POWER TRANSFORMER)

1	GND
2	———
3	GND

P7503 (TO MAIN)

1	TUNER Ⓛ
2	GND
3	POWER SW ON Ⓛ
4	SERIAL CLOCK
5	SERIAL DATA
6	P. ON Ⓛ
7	REG 12.7V
8	SYSTEM CTL BACK UP

P7508 (TO MAIN)

1	P02
2	P23
3	KEY SCAN
4	P03
5	P21

P7510 (TO FM AUDIO)

1	REC VR OUT (L-CH)
2	REC VR IN (L-CH)
3	GND
4	REC VR OUT (R-CH)
5	REC VR IN (R-CH)
6	GND

P7507 (TO OPERATION)

1	SYSTEM CTL 5V
2	AC 6V
3	AC 6V
4	REG −28V
5	(GND)
6	POWER SW

P7505 (TO TV DEMODULATOR)

1	AFC OUT
2	AFC IN
3	GND

P7501 (TO TV DEMODULATOR)

1	GND
2	BS
3	BV
4	BU
5	BT
6	GND
7	———
8	AGC DEF
9	AUDIO DEF
10	VIDEO IN
11	REG 12V

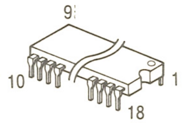
P7504

1	BACK UP
2	BACK UP 5V

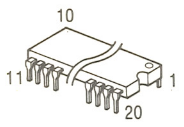
Back Page:
OPERATION Section

TIMER & TIMER OPERATION CIRCUIT BOARD	
Transistor	
Q7507	D-4
Q7508	D-4
Q7510	D-4
Q7522	D-2
Q7523	D-2
Q7550	B-2
Q7554	D-4
Q7580	A-6
Q7581	A-5
Transistor & Resistor	
QR7501	C-2
QR7502	B-3
QR7511	D-4
QR7513	E-7
QR7514	D-7
QR7515	D-7
QR7520	B-4
QR7551	C-2
QR7552	A-2
Integrated Circuit	
IC7501	C-5
IC7502	C-7
IC7503	B-4
IC7504	D-3
IC7505	B-2
IC7506	D-5
IC7507	B-2
IC7508	B-5
IC7509	B-3
IC7510	D-2
IC7580	E-7
Test Point	
TP7501	D-5
TP7504	C-4
TP7505	D-3
TP7507	D-3
TP7508	B-2
TP7515	C-4
TP7521	D-4
TP7581	E-8
Adjustment	
R7535	B-3
R7596	B-2
R7621	E-8
C7502	C-6
T7580	E-7

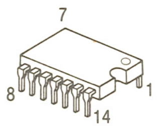
ADDRESS INFORMATION



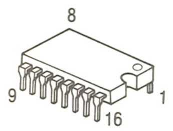
MN1219
AN6873N



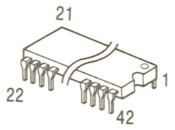
AN5033



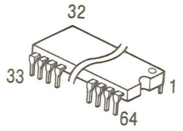
µPD4066BC



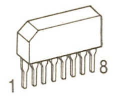
µPD4050BC



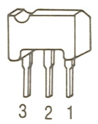
MN1455BVLK



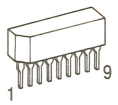
MN1512VQF



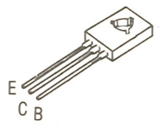
µPC1373H



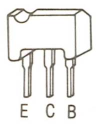
MN1280P



AN5421
AN6913



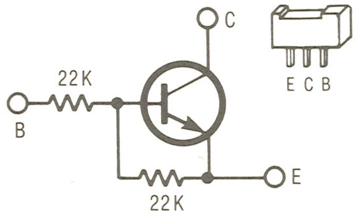
2SA794



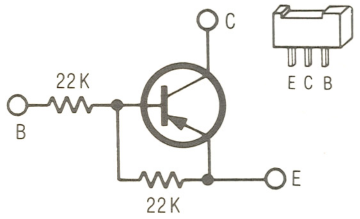
2SB644
2SD637
2SD636
2SB641

TIMER & TIMER OPERATION SCHEMATIC	
Transistor	
Q7507	F-15
Q7508	F-15
Q7510	E-14
Q7522	E-15
Q7523	F-14
Q7550	B-16
Q7554	C-9
Q7580	C-11
Q7581	C-12
Transistor & Resistor	
QR7501	C-15
QR7502	D-11
QR7511	E-13
QR7513	E-1
QR7514	E-1
QR7515	E-2
QR7520	C-4
QR7551	A-12
QR7552	A-15
Integrated Circuit	
IC7501	A-3
IC7502	D-3
IC7503	G-9
IC7504	G-11
IC7505	D-14
IC7506	C-2
IC7507	C-13
IC7508	A-8
IC7509	B-11
IC7510	B-11
IC7580	G-6
Test Point	
TP7501	B-4
TP7504	A-5
TP7505	F-13
TP7507	C-3
TP7508	A-14
TP7515	C-16
TP7521	E-12
TP7581	F-6
Adjustment	
R7535	C-13
R7596	B-13
R7621	G-2
C7502	A-5
T7580	F-7
Connector	
P7501	D-17
P7502	E-17
P7503	F-17
P7504	A-1
P7505	C-17
P7507	E-17
P7508	G-17
P7509	G-17
P7510	G-1
P7511	B-16
P7580	G-7
P7701	B-17
P7702	A-17

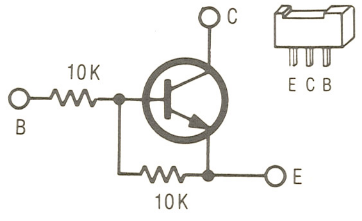
ADDRESS INFORMATION


C
22K
B
22K
E
E C B

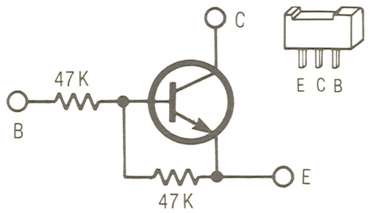
DTA124EA


C
22K
B
22K
E
E C B

DTA124EA

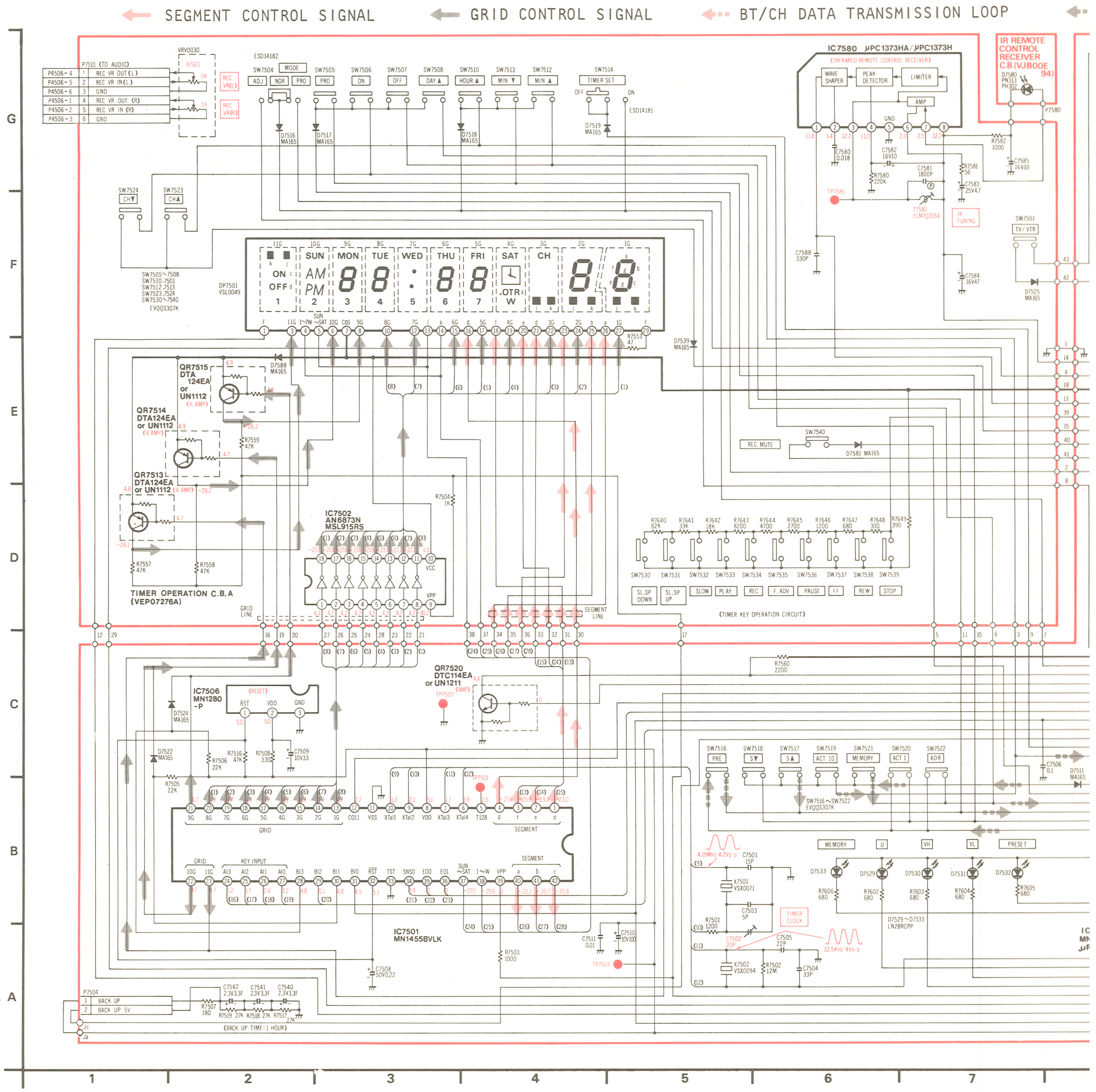

C
10K
B
10K
E
E C B

DTC114EA


C
47K
B
47K
E
E C B

DTC144EA

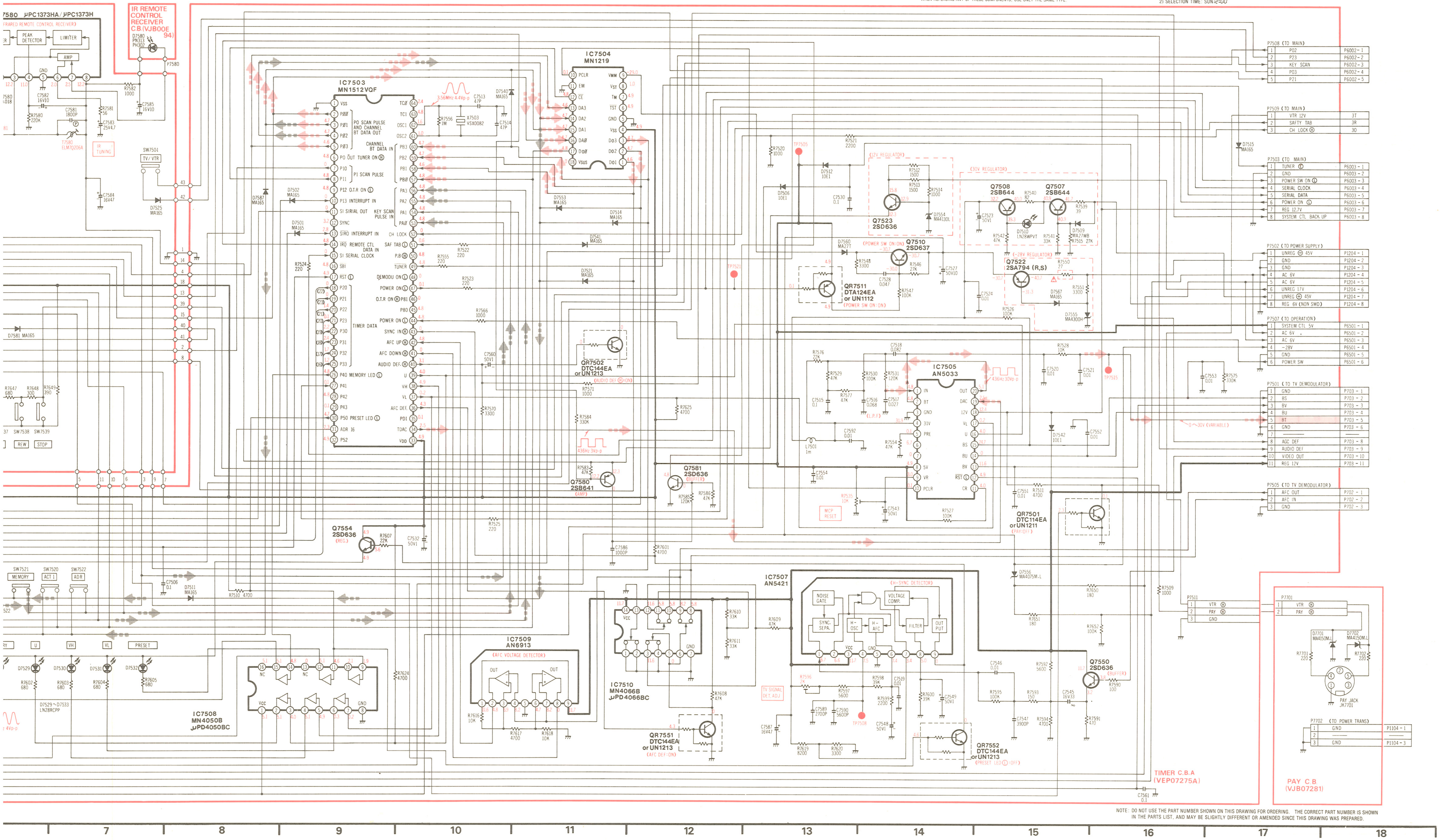
3-28. TIMER & TIMER OPERATION SCHEMATIC DIAGRAM


SEGMENT CONTROL SIGNAL
GRID CONTROL SIGNAL
BT/CH DATA TRANSMISSION LOOP
G
F
E
D
C
B
A
1
2
3
4
5
6
7
P7510 (TO AUDIO)
REC VR OUT (L)
REC VR IN (L)
GND
REC VR OUT (R)
REC VR IN (R)
GND
IC7580 µPC1373HA/µPC1373H
(INFRARED REMOTE CONTROL RECEIVER)
WAVE SHAPER
PEAK DETECTOR
LIMITER
AMP
IR REMOTE CONTROL RECEIVER C.B (VJBOOE 94)
SW7504 MODE
SW7505 PRO
SW7506 ON
SW7507 OFF
SW7508 DAY ▲
SW7510 HOUR ▲
SW7513 MIN ▼
SW7512 MIN ▲
SW7514 TIMER SET
SW7524 CH▼
SW7523 CH▲
SW7501 TV/VTR
DP7501 VSL0049
SUN MON TUE WED THU FRI SAT CH
ON OFF AM PM OTR W
QR7515 DTA124EA or UN1112
QR7514 DTA124EA or UN1112
QR7513 DTA124EA or UN1112
IC7502 AN6873N MSL915RS
TIMER OPERATION C.B.A (VEP07276A)
SW7530 SL.SP DOWN
SW7531 SL.SP UP
SW7532 SLOW
SW7533 PLAY
SW7534 REC
SW7535 F.ADV
SW7536 PAUSE
SW7537 FF
SW7538 REW
SW7539 STOP
(TIMER KEY OPERATION CIRCUIT)
REC MUTE
SW7540
D7581 MA165
IC7506 MN1280-P
RST VDD GND
(RESET)
QR7520 DTC114EA or UN1211
IC7501 MN1455BVLK
GRID
SEGMENT
KEY INPUT
SW7516 PRE
SW7518 S▼
SW7517 S▲
SW7519 ACT 10
SW7521 MEMORY
SW7520 ACT 1
SW7522 ADR
MEMORY
VH
VL
PRESET
D7529~D7533 LN28RCPP
X7501 VSX0071
X7502 VSX0094
TIMER CLOCK
P7504
BACK UP
BACK UP 5V
(BACK UP TIME: 1 HOUR)

TRANSMISSION LOOP   PRESET/MEMORY CONTROL LOOP

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IN THE FOLLOWING CONDITION.
1) MODE SELECTOR: CLOCK
2) SELECTION TIME: SUN 12:00



7580 µPC1373HA / µPC1373H
(INFRARED REMOTE CONTROL RECEIVER)
PEAK DETECTOR
LIMITER
AMP
IR REMOTE CONTROL RECEIVER C.B (VJB00E94)
D7580 PN313 PH302
P7580
SW7501 TV/VTR
IR TUNING
IC7503 MN1512VQF
PO SCAN PULSE AND CHANNEL BT DATA OUT
CHANNEL BT DATA IN
PI SCAN PULSE
KEY SCAN PULSE IN
TIMER DATA
3.58MHz 4.4Vp-p
X7503 VSX0082
IC7504 MN1219
PCLR
CE
VMM
VSS
DA3
DA2
DA1
DA0
DO3
DO2
DO1
VSUS
QR7502 DTC144EA or UN1213 (AUDIO DEF ON)
Q7580 2SB641 (AMP)
Q7581 2SD636 (BUFFER)
Q7554 2SD636 (REG.)
Q7523 2SD636
(12V REGULATOR)
(30V REGULATOR)
Q7508 2SB644
Q7507 2SB644
Q7510 2SD637 (POWER SW ON ON)
QR7511 DTA124EA or UN1112 (POWER SW ON ON)
Q7522 2SA794 (R,S)
(-28V REGULATOR)
IC7505 AN5033
436Hz 30Vp-p
(L.P.F)
MCP RESET
QR7501 DTC114EA or UN1211 (PAY ON)
IC7507 AN5421
(H-SYNC DETECTOR)
NOISE GATE
SYNC SEPA.
H-OSC
H-AFC
VOLTAGE COMP.
FILTER
OUT PUT
IC7509 AN6913
(AFC VOLTAGE DETECTOR)
IC7510 MN4066B µPD4066BC
QR7551 DTC144EA or UN1213 (AFC DEF ON)
QR7552 DTC144EA or UN1213 (PRESET LED OFF)
Q7550 2SD636 (BUFFER)
TV SIGNAL DET. ADJ.
IC7508 MN4050B µPD4050BC
SW7521 MEMORY
SW7520 ACT
SW7522 ADR
SW7538 REW
SW7539 STOP
PRESET
D7529~D7533 LN28RCPP
0~30V (VARIABLE)
P7508 (TO MAIN)
P7509 (TO MAIN)
P7503 (TO MAIN)
P7502 (TO POWER SUPPLY)
P7507 (TO OPERATION)
P7501 (TO TV DEMODULATOR)
P7505 (TO TV DEMODULATOR)
P7511
TIMER C.B.A (VEP07275A)
P7701
PAY JACK JK7701
P7702 (TO POWER TRANS)
PAY C.B (VJB07281)
7 8 9 10 11 12 13 14 15 16 17 18

P7508 (TO MAIN)		
1	P02	P6002-1
2	P23	P6002-2
3	KEY SCAN	P6002-3
4	P03	P6002-4
5	P21	P6002-5

P7509 (TO MAIN)		
1	VTR 12V	3T
2	SAFTY TAB	3R
3	CH LOCK ⓗ	3O

P7503 (TO MAIN)		
1	TUNER ⓛ	P6003-1
2	GND	P6003-2
3	POWER SW ON ⓛ	P6003-3
4	SERIAL CLOCK	P6003-4
5	SERIAL DATA	P6003-5
6	POWER ON ⓛ	P6003-6
7	REG 12.7V	P6003-7
8	SYSTEM CTL BACK UP	P6003-8

P7502 (TO POWER SUPPLY)		
1	UNREG ⊖ 45V	P1204-1
2	GND	P1204-2
3	GND	P1204-3
4	AC 6V	P1204-4
5	AC 6V	P1204-5
6	UNREG 17V	P1204-6
7	UNREG ⊕ 45V	P1204-7
8	REG 6V (NON SWD)	P1204-8

P7507 (TO OPERATION)		
1	SYSTEM CTL 5V	P6501-1
2	AC 6V	P6501-2
3	AC 6V	P6501-3
4	-28V	P6501-4
5	GND	P6501-5
6	POWER SW	P6501-6

P7501 (TO TV DEMODULATOR)		
1	GND	P703-1
2	BS	P703-2
3	BV	P703-3
4	BU	P703-4
5	BT	P703-5
6	GND	P703-6
7		
8	AGC DEF	P703-8
9	AUDIO DEF	P703-9
10	VIDEO OUT	P703-10
11	REG 12V	P703-11

P7505 (TO TV DEMODULATOR)		
1	AFC OUT	P702-1
2	AFC IN	P702-2
3	GND	P702-3

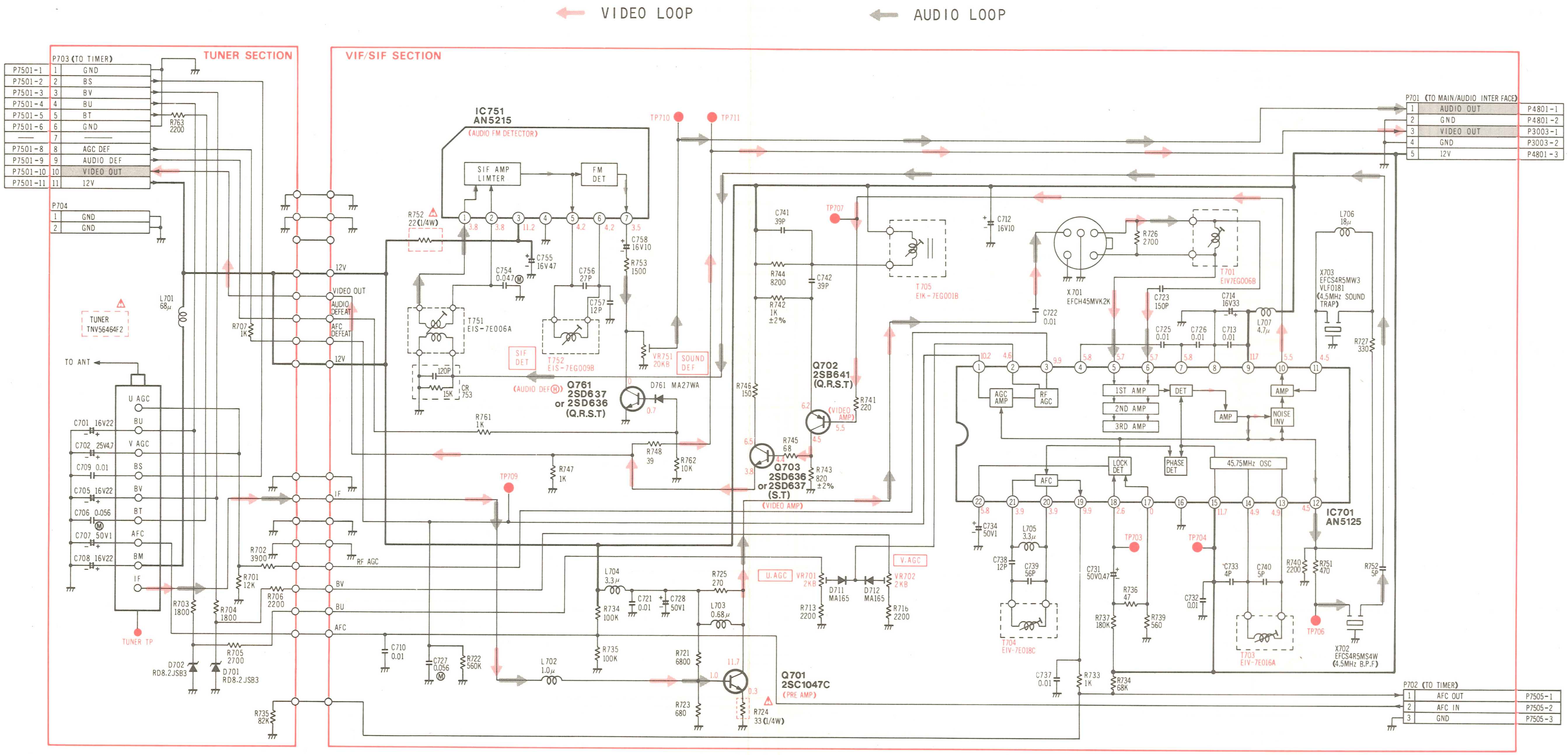
P7511	
1	VTR ⓗ
2	PAY ⓗ
3	GND

P7701	
1	VTR ⓗ
2	PAY ⓗ

P7702 (TO POWER TRANS)		
1	GND	P1104-1
2		
3	GND	P1104-3

NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

3-29. TV DEMODULATOR SCHEMATIC DIAGRAM



VIDEO LOOP
AUDIO LOOP
TUNER SECTION
VIF/SIF SECTION
P703 (TO TIMER)
P7501-1 1 GND
P7501-2 2 BS
P7501-3 3 BV
P7501-4 4 BU
P7501-5 5 BT
P7501-6 6 GND
7
P7501-8 8 AGC DEF
P7501-9 9 AUDIO DEF
P7501-10 10 VIDEO OUT
P7501-11 11 12V
P704
1 GND
2 GND
R763 2200
TUNER TNV56464F2
L701 68μ
TO ANT
U AGC
BU
V AGC
BS
BV
BT
AFC
BM
IF
C701 16V22
C702 25V4.7
C709 0.01
C705 16V22
C706 0.056
C707 50V1
C708 16V22
TUNER TP
D702 RD8.2JSB3
D701 RD8.2JSB3
R703 1800
R704 1800
R705 2700
R701 12K
R702 3900
R706 2200
R707 1K
R735 82K
RF AGC
12V
VIDEO OUT
AUDIO DEFEAT
AFC DEFEAT
IC751 AN5215
(AUDIO FM DETECTOR)
SIF AMP LIMTER
FM DET
TP710
TP711
R752 22 (1/4W)
C754 0.047
C755 16V47
C756 27P
C757 12P
C758 16V10
R753 1500
T751 EIS-7E006A
T752 EIS-7E009B
SIF DET
120P
15K
CR 753
(AUDIO DEF)
Q761 2SD637 or 2SD636 (Q.R.S.T)
D761 MA27WA
VR751 20KB
SOUND DEF
R761 1K
R747 1K
R748 39
R762 10K
TP709
C710 0.01
C727 0.056
R722 560K
L702 1.0μ
L704 3.3μ
R734 100K
C721 0.01
C728 50V1
R725 270
L703 0.68μ
R735 100K
R721 6800
R723 680
R724 33 (1/4W)
Q701 2SC1047C (PRE AMP)
C741 39P
R744 8200
C742 39P
R742 1K ±2%
TP707
T705 EIK-7E001B
R746 150
Q702 2SB641 (Q.R.S.T)
(VIDEO AMP)
R741 220
R745 68
Q703 2SD636 or 2SD637 (S.T)
(VIDEO AMP)
R743 820 ±2%
U.AGC
VR701 2KB
D711 MA165
D712 MA165
V.AGC
VR702 2KB
R713 2200
R716 2200
C712 16V10
C722 0.01
X701 EFCH45MVK2K
R726 2700
T701 EIV7EG006B
C723 150P
C725 0.01
C726 0.01
C713 0.01
C714 16V33
L707 4.7μ
L706 18μ
X703 EFCS4R5MW3 VLF0181 (4.5MHz SOUND TRAP)
R727 330
AGC AMP
RF AGC
1ST AMP
2ND AMP
3RD AMP
DET
AMP
AMP
NOISE INV
AFC
LOCK DET
PHASE DET
45.75MHz OSC
IC701 AN5125
C734 50V1
L705 3.3μ
C738 12P
C739 56P
T704 EIV-7E018C
C731 50V0.47
R736 47
R737 180K
R739 560
C732 0.01
TP703
TP704
C733 4P
C740 5P
T703 EIV-7E016A
R740 2200
R751 470
R752 5P
TP706
X702 EFCS4R5MS4W (4.5MHz B.P.F)
C737 0.01
R733 1K
R734 68K
P701 (TO MAIN/AUDIO INTER FACE)
1 AUDIO OUT P4801-1
2 GND P4801-2
3 VIDEO OUT P3003-1
4 GND P3003-2
5 12V P4801-3
P702 (TO TIMER)
1 AFC OUT P7505-1
2 AFC IN P7505-2
3 GND P7505-3

NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

Back Page:
TIMER & TIMER OPERATION Section

3-30. TV DEMODULATOR CIRCUIT BOARD (VEB0114A1)

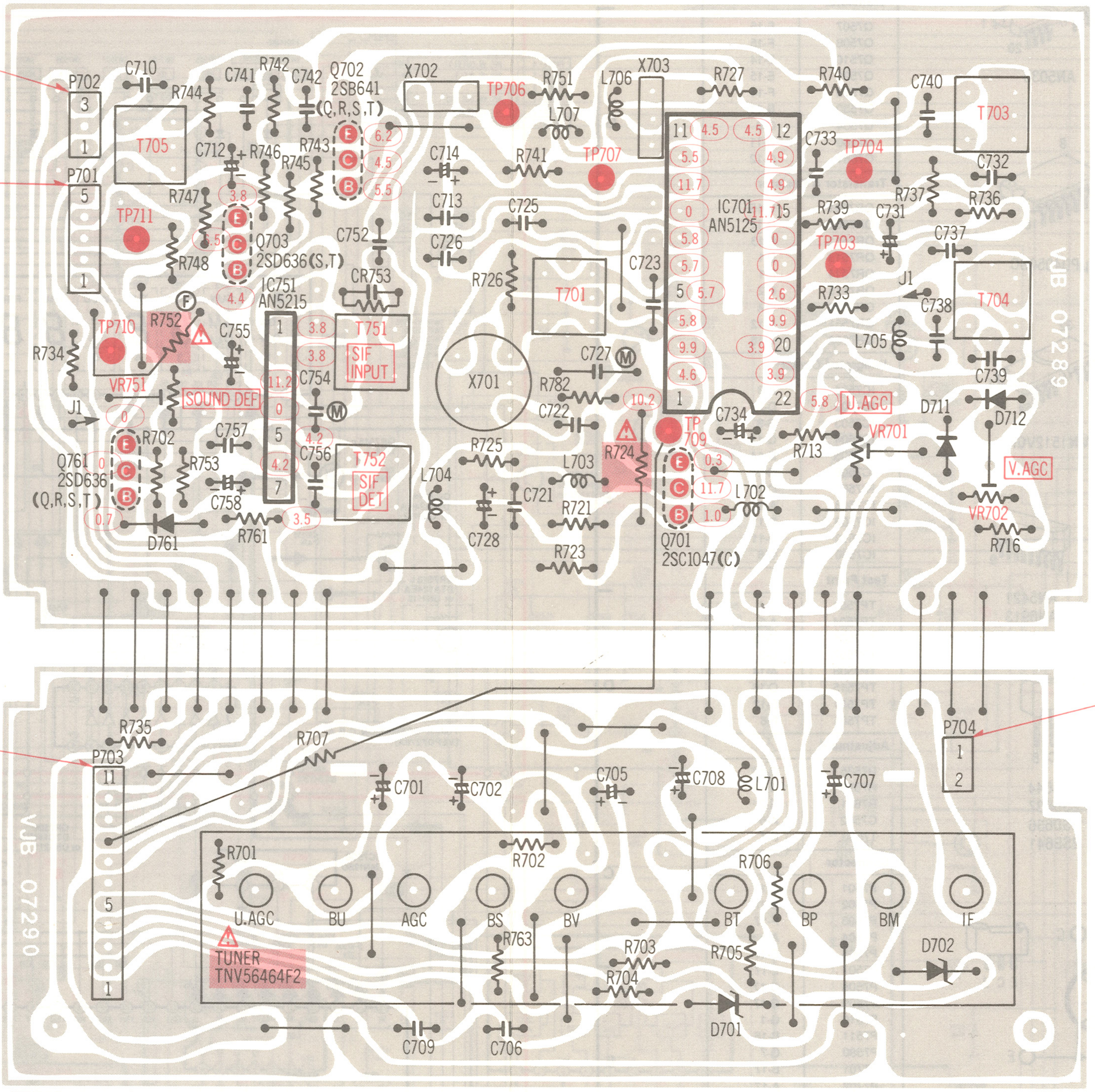
P702 (TO TIMER)

1	AFC OUT
2	AFC IN
3	GND

P701 (TO MAIN/AUDIO INTERFACE)

1	AUDIO OUT
2	GND
3	VIDEO OUT
4	GND
5	12V

(VIF/SIF SECTION)


P702
C710
R744
C741
R742
C742
Q702
2SB641
(Q,R,S,T)
X702
TP706
R751
L707
L706
X703
R727
R740
C740
T703
T705
C712
R746
R743
R745
E
C
B
6.2
4.5
5.5
C714
R741
TP707
IC701
AN5125
C733
TP704
C732
P701
R747
3.8
TP711
R748
Q703
2SD636(S,T)
C752
C713
C725
C726
R739
C731
R737
R736
TP703
C737
IC751
AN5215
CR753
R726
T701
C723
J1
R733
C738
T704
L705
4.4
F
TP710
R752
C755
T751
SIF INPUT
3.8
R734
VR751
SOUND DEF
C754
M
X701
R782
C727
C722
10.2
U.AGC
D711
C739
D712
J1
0
R702
C757
C756
TP709
C734
R713
VR701
Q761
2SD636
(Q,R,S,T)
R753
4.2
T752
SIF DET
L704
R725
L703
R724
0.3
11.7
L702
V.AGC
C758
R761
3.5
0.7
D761
C728
C721
R721
R723
1.0
Q701
2SC1047(C)
VR702
R716
5.5
11.7
0
5.8
5.7
5.7
5.8
9.9
4.6
4.5
4.9
4.9
11.7
0
0
2.6
9.9
3.9
3.9
11
12
15
20
22
1
5
7
R735
R707
P703
C701
C702
C705
C708
L701
C707
P704
R701
R702
R706
U.AGC
BU
AGC
BS
BV
BT
BP
BM
IF
R763
TUNER
TNV56464F2
R703
R704
R705
D702
D701
C709
C706
VJB 07289
VJB 07290

(TUNER SECTION)

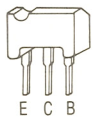
P703 (TO TIMER)

1	GND
2	BS
3	BV
4	BU
5	BT
6	GND
7	————
8	AGC DEF
9	AUDIO DEF
10	VIDEO OUT (T1)
11	12V

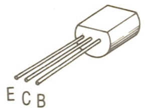
P704 (TO POWER TRANSFORMER)

1	GND
2	GND

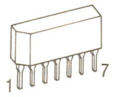
ICs & TRANSISTORs INFORMATION



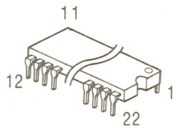
2SB641
2SD636



2SC1047



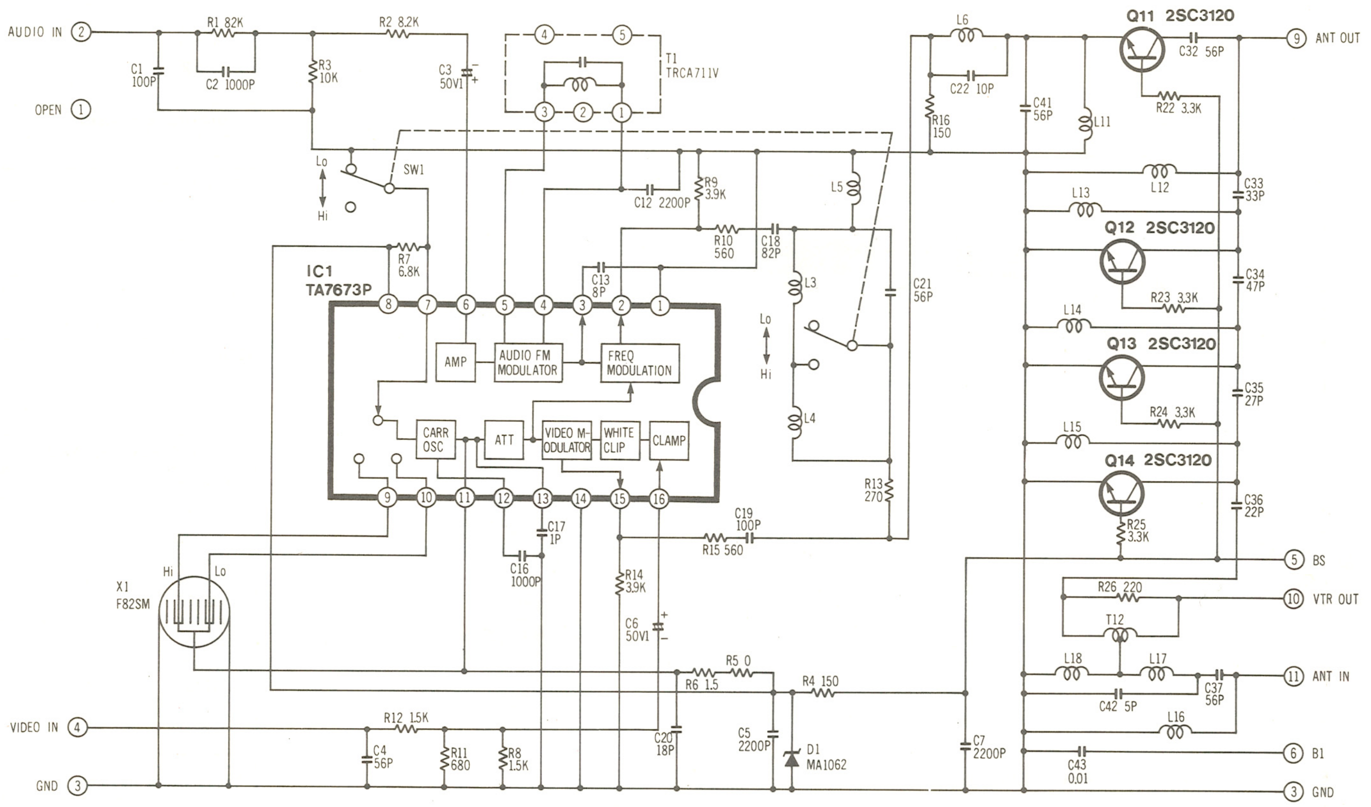
AN5215



AN5125

3-31. RF CONVERTER & ANTENNA BOOSTER SCHEMATIC DIAGRAM

— UNIT No. ENC86709 —

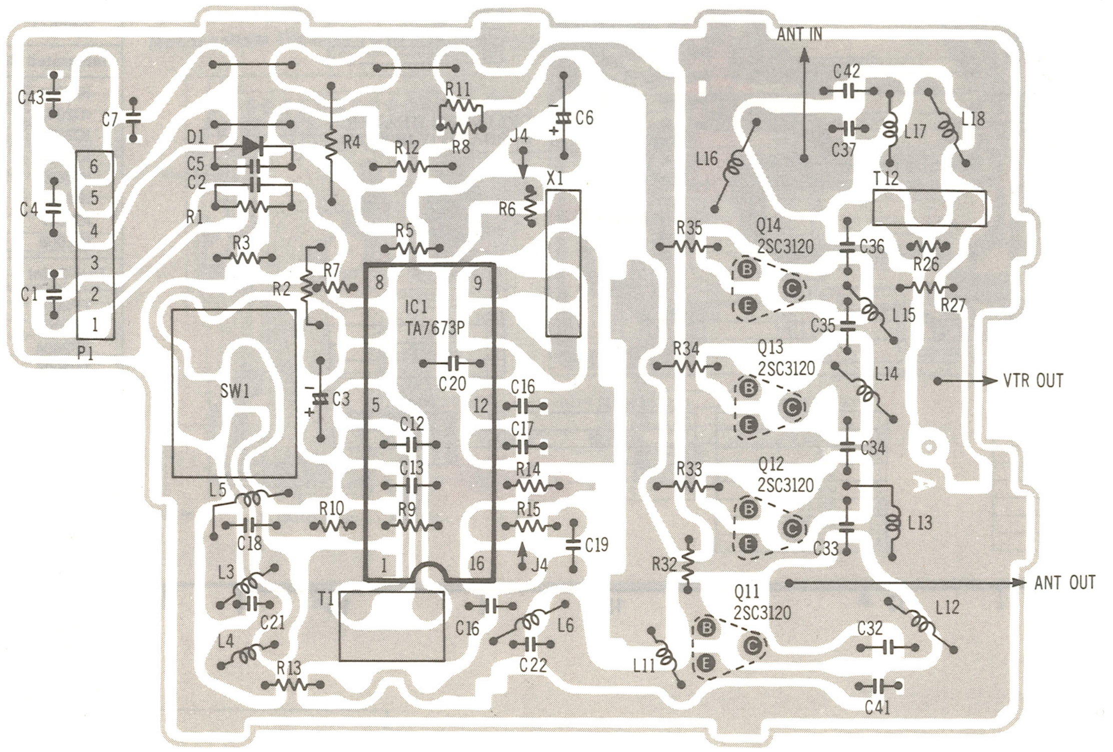


AUDIO IN ②
OPEN ①
VIDEO IN ④
GND ③
R1 82K
R2 8.2K
R3 10K
C1 100P
C2 1000P
C3 50V1
T1 TRCA711V
SW1
Lo
Hi
IC1 TA7673P
AMP
AUDIO FM MODULATOR
FREQ MODULATION
CARR OSC
ATT
VIDEO MODULATOR
WHITE CLIP
CLAMP
X1 F82SM
L6
C22 10P
R16 150
C41 56P
L11
Q11 2SC3120
C32 56P
R22 3.3K
⑨ ANT OUT
L13
L12
C33 33P
Q12 2SC3120
C34 47P
R23 3.3K
L14
Q13 2SC3120
C35 27P
R24 3.3K
L15
Q14 2SC3120
C36 22P
R25 3.3K
⑤ BS
R26 220
⑩ VTR OUT
T12
L18
L17
⑪ ANT IN
C42 5P
C37 56P
L16
⑥ B1
C43 0.01
③ GND
C12 2200P
R9 3.9K
R10 560
C18 82P
C13 8P
L5
L3
L4
C21 56P
R13 270
R7 6.8K
C17 1P
C16 1000P
R14 3.9K
C19 100P
R15 560
C6 50V1
R5 0
R6 1.5
R4 150
C5 2200P
D1 MA1062
C7 2200P
C20 18P
R12 1.5K
C4 56P
R11 680
R8 1.5K

NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

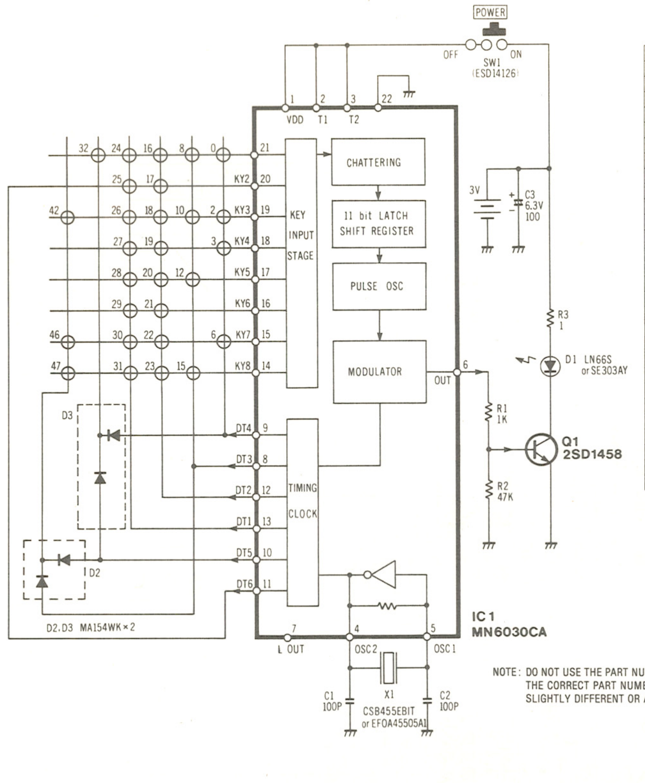
3-32. RF CONVERTER & ANTENNA BOOSTER CIRCUIT BOARD

— UNIT No. ENC86709 —



ANT IN
VTR OUT
ANT OUT
IC1 TA7673P
SW1
P1
X1
J4
Q11 2SC3120
Q12 2SC3120
Q13 2SC3120
Q14 2SC3120
T1
T12

3-33. IR REMOTE CONTROL SCHEMATIC DIAGRAM

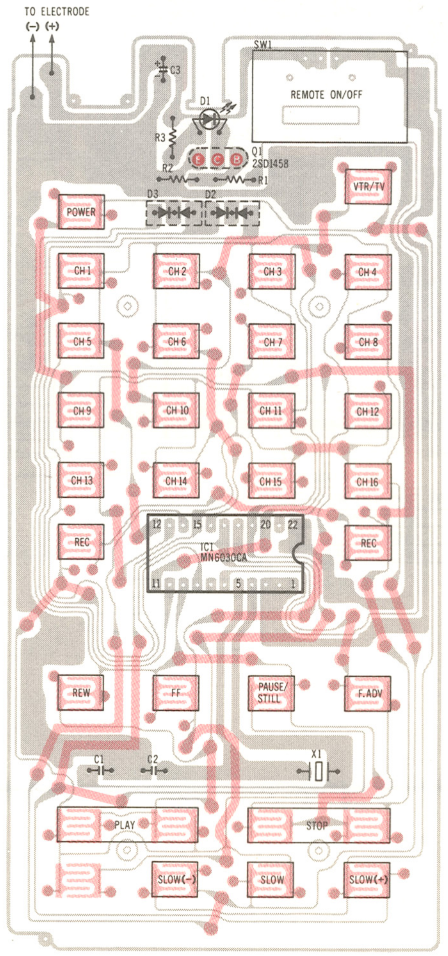


POWER
OFF
ON
SW1 (ESD14126)
VDD
T1
T2
KEY INPUT STAGE
CHATTERING
11 bit LATCH SHIFT REGISTER
PULSE OSC
MODULATOR
TIMING CLOCK
OUT
L OUT
OSC2
OSC1
IC1 MN6030CA
3V
C3 6.3V 100
R3 1
D1 LN66S or SE303AY
R1 1K
R2 47K
Q1 2SD1458
C1 100P
X1 CSB455EBIT or EFOA455D5A
C2 100P
D2, D3 MA154WK × 2

KEY NO.	FUNCTION
0	STOP
2	REW
3	FF
6	PAUSE/STILL
8	REC
10	PLAY
12	F. ADV
15	SLOW
16	CH1
17	CH2
18	CH3
19	CH4
20	CH5
21	CH6
22	CH7
23	CH8
24	CH9
25	CH10
26	CH11
27	CH12
28	CH13
29	CH14
30	CH15
31	CH16
32	POWER
42	VTR/TV
46	SLOW (+)
47	SLOW (−)

NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

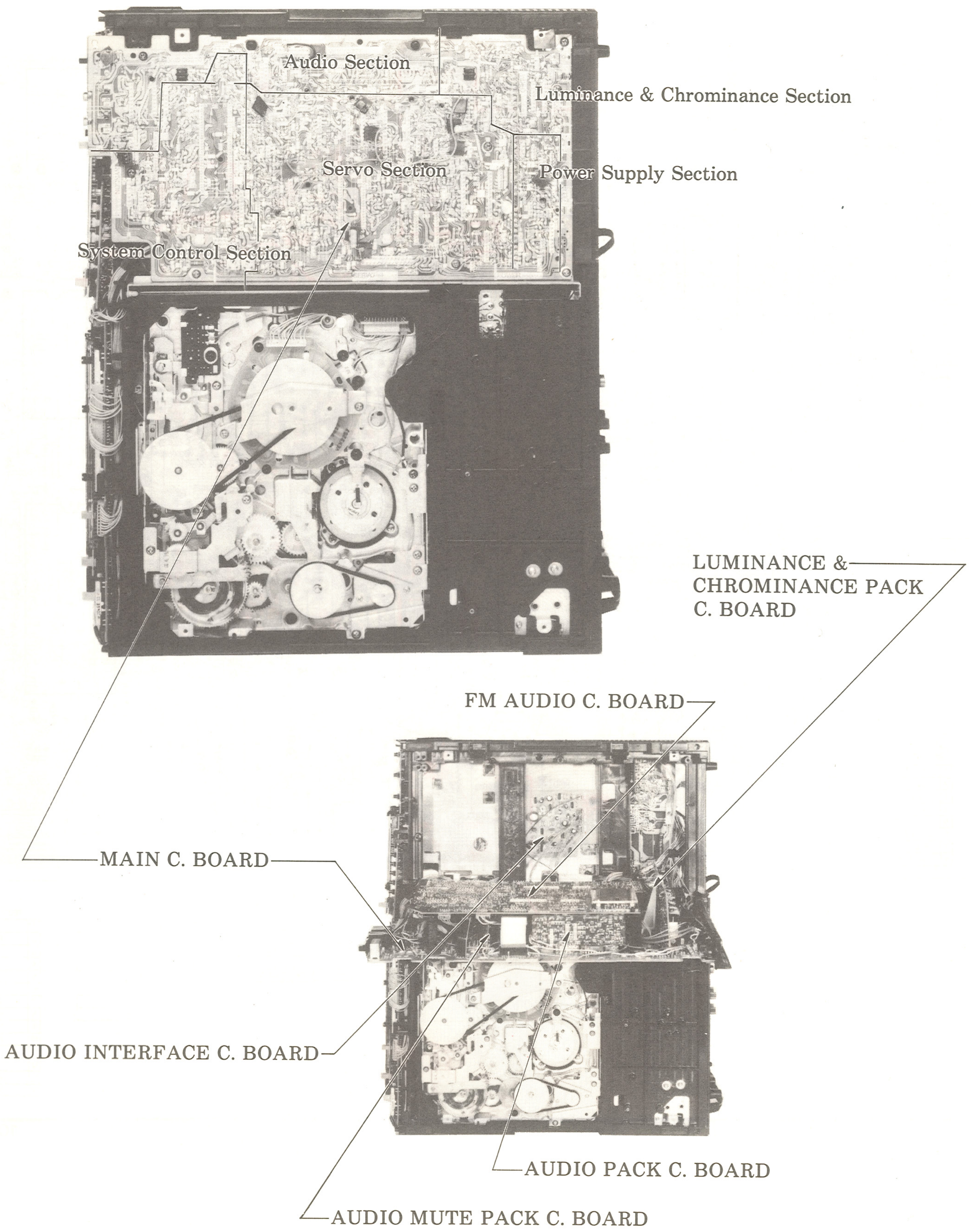
3-34. IR REMOTE CONTROL CIRCUIT BOARD (VEP22039A)



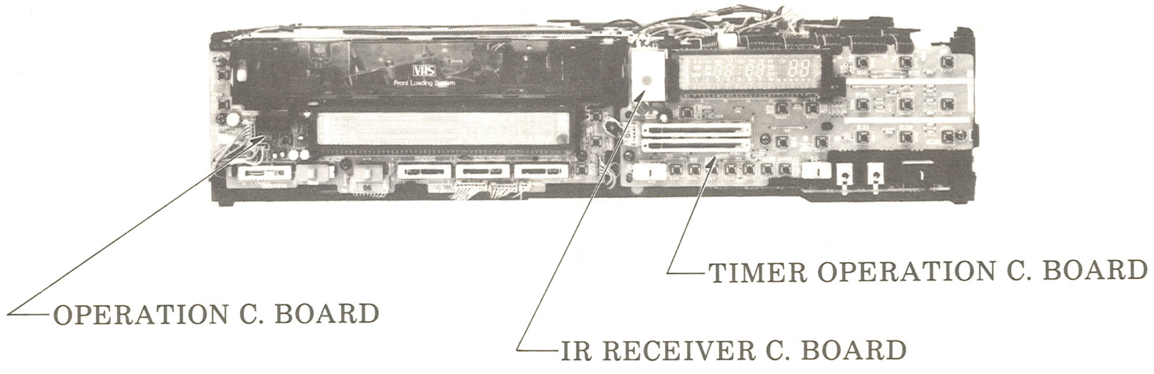
TO ELECTRODE
(−) (+)
SW1
REMOTE ON/OFF
POWER
VTR/TV
CH 1
CH 2
CH 3
CH 4
CH 5
CH 6
CH 7
CH 8
CH 9
CH 10
CH 11
CH 12
CH 13
CH 14
CH 15
CH 16
REC
IC1 MN6030CA
Q1 2SD1458
REW
FF
PAUSE/STILL
F.ADV
PLAY
STOP
SLOW(−)
SLOW
SLOW(+)

3-35. CIRCUIT BOARD LAYOUT

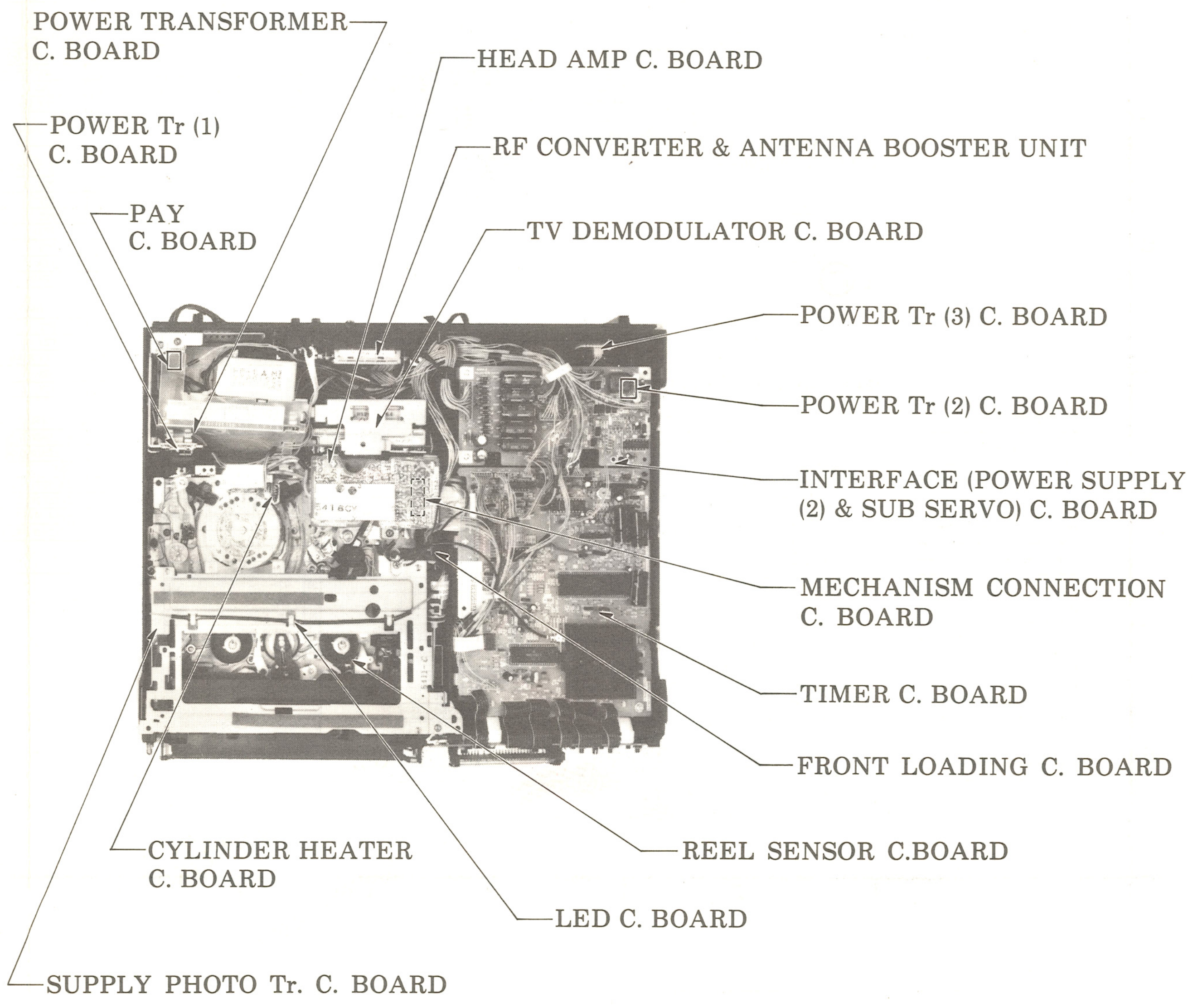
BOTTOM VIEW


Audio Section
Luminance & Chrominance Section
Servo Section
Power Supply Section
System Control Section
LUMINANCE & CHROMINANCE PACK C. BOARD
FM AUDIO C. BOARD
MAIN C. BOARD
AUDIO INTERFACE C. BOARD
AUDIO PACK C. BOARD
AUDIO MUTE PACK C. BOARD

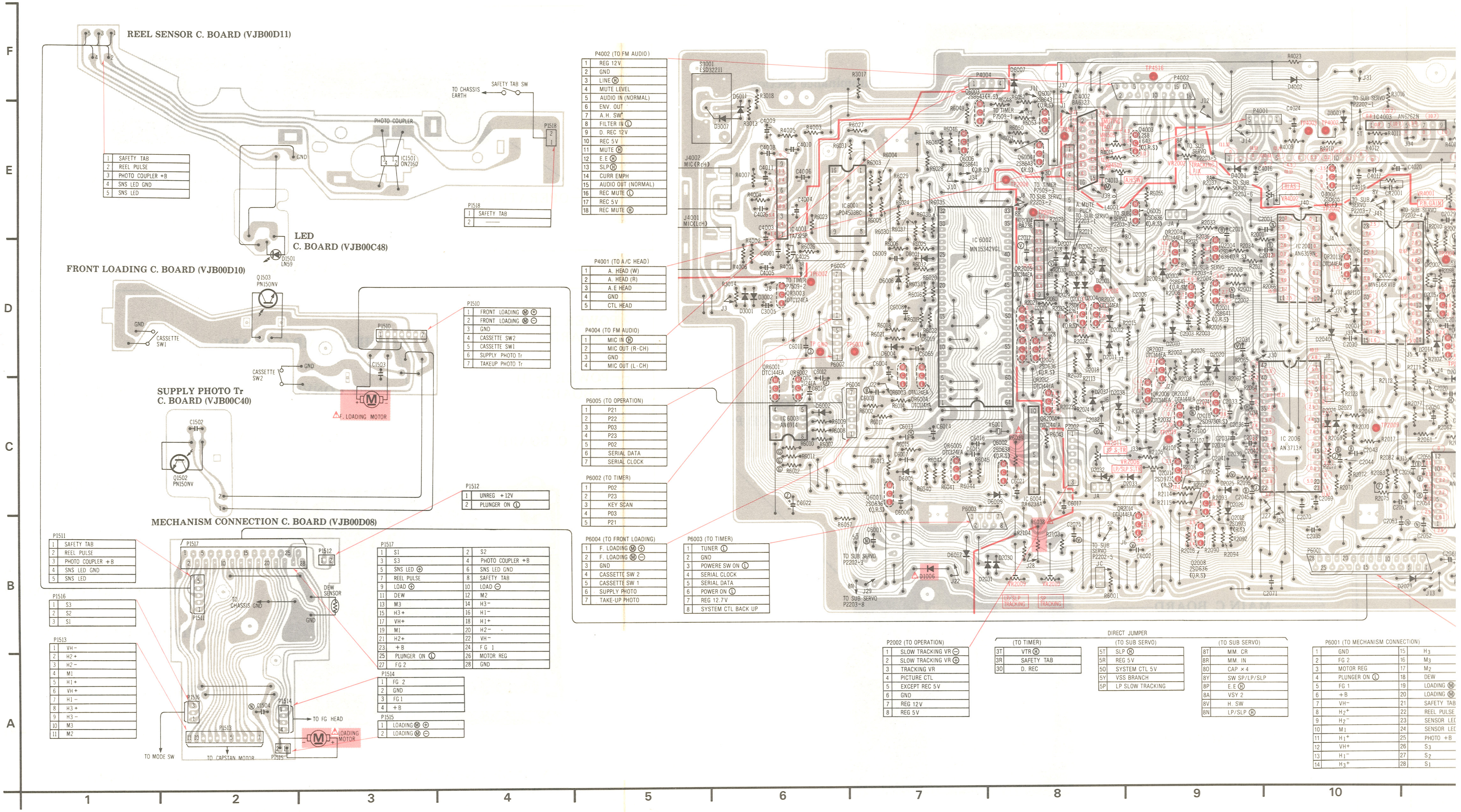
FRONT VIEW


TIMER OPERATION C. BOARD
OPERATION C. BOARD
IR RECEIVER C. BOARD

TOP VIEW


POWER TRANSFORMER C. BOARD
HEAD AMP C. BOARD
POWER Tr (1) C. BOARD
RF CONVERTER & ANTENNA BOOSTER UNIT
PAY C. BOARD
TV DEMODULATOR C. BOARD
POWER Tr (3) C. BOARD
POWER Tr (2) C. BOARD
INTERFACE (POWER SUPPLY (2) & SUB SERVO) C. BOARD
MECHANISM CONNECTION C. BOARD
TIMER C. BOARD
FRONT LOADING C. BOARD
CYLINDER HEATER C. BOARD
REEL SENSOR C.BOARD
LED C. BOARD
SUPPLY PHOTO Tr. C. BOARD

3-36. MAIN CIRCUIT BOARD (VEP03276A1)


REEL SENSOR C. BOARD (VJB00D11)
LED C. BOARD (VJB00C48)
FRONT LOADING C. BOARD (VJB00D10)
SUPPLY PHOTO Tr C. BOARD (VJB00C40)
MECHANISM CONNECTION C. BOARD (VJB00D08)
MAIN C. BOARD
SAFETY TAB SW
TO CHASSIS EARTH
PHOTO COUPLER
IC1501 ON2160
D1501 LN59
Q1503 PN150NV
Q1502 PN150NV
CASSETTE SW1
CASSETTE SW2
F. LOADING MOTOR
LOADING MOTOR
DEW SENSOR
TO CHASSIS GND
TO FG HEAD
TO MODE SW
TO CAPSTAN MOTOR
IC6002 MN15342VGL
IC6001 μPD4503BC
IC4001
IC4002 BA6323
IC2001 AN6359N
IC2002 MN6168VIB
IC2006 AN3713K
IC6003 AN6914
IC4003 AN6262N
IC6004 BA6238A
J4002 MIC (R-CH)
J4001 MIC (L-CH)
S3001 ESD32211
LP/SLP TRACKING
SP TRACKING
A
B
C
D
E
F
1
2
3
4
5
6
7
8
9
10

P1518

1	SAFETY TAB
2	———

1	SAFETY TAB
2	REEL PULSE
3	PHOTO COUPLER +B
4	SNS LED GND
5	SNS LED

P1510

1	FRONT LOADING Ⓜ ⊕
2	FRONT LOADING Ⓜ ⊖
3	GND
4	CASSETTE SW2
5	CASSETTE SW1
6	SUPPLY PHOTO Tr
7	TAKEUP PHOTO Tr

P1512

1	UNREG +12V
2	PLUNGER ON Ⓛ

P1511

1	SAFETY TAB
2	REEL PULSE
3	PHOTO COUPLER +B
4	SNS LED GND
5	SNS LED

P1516

1	S3
2	S2
3	S1

P1513

1	VH −
2	H2 +
3	H2 −
4	M1
5	H1 +
6	VH +
7	H1 −
8	H3 +
9	H3 −
10	M3
11	M2

P1517

1	S1	2	S2
3	S3	4	PHOTO COUPLER +B
5	SNS LED ⊕	6	SNS LED GND
7	REEL PULSE	8	SAFETY TAB
9	LOAD ⊕	10	LOAD ⊖
11	DEW	12	M2
13	M3	14	H3−
15	H3+	16	H1−
17	VH+	18	H1+
19	M1	20	H2−
21	H2+	22	VH−
23	+B	24	FG 1
25	PLUNGER ON Ⓛ	26	MOTOR REG
27	FG 2	28	GND

P1514

1	FG 2
2	GND
3	FG 1
4	+B

P1515

1	LOADING Ⓜ ⊕
2	LOADING Ⓜ ⊖

P4002 (TO FM AUDIO)

1	REG 12V
2	GND
3	LINE Ⓗ
4	MUTE LEVEL
5	AUDIO IN (NORMAL)
6	ENV. OUT
7	A.H. SW
8	FILTER IN Ⓛ
9	D. REC 12V
10	REC 5V
11	MUTE Ⓗ
12	E.E Ⓗ
13	SLP Ⓗ
14	CURR EMPH
15	AUDIO OUT (NORMAL)
16	REC MUTE Ⓛ
17	REC 5V
18	REC MUTE Ⓗ

P4001 (TO A/C HEAD)

1	A. HEAD (W)
2	A. HEAD (R)
3	A.E HEAD
4	GND
5	CTL HEAD

P4004 (TO FM AUDIO)

1	MIC IN Ⓗ
2	MIC OUT (R-CH)
3	GND
4	MIC OUT (L-CH)

P6005 (TO OPERATION)

1	P21
2	P22
3	P03
4	P23
5	P02
6	SERIAL DATA
7	SERIAL CLOCK

P6002 (TO TIMER)

1	P02
2	P23
3	KEY SCAN
4	P03
5	P21

P6004 (TO FRONT LOADING)

1	F. LOADING Ⓜ ⊕
2	F. LOADING Ⓜ ⊖
3	GND
4	CASSETTE SW 2
5	CASSETTE SW 1
6	SUPPLY PHOTO
7	TAKE-UP PHOTO

P6003 (TO TIMER)

1	TUNER Ⓛ
2	GND
3	POWERE SW ON Ⓛ
4	SERIAL CLOCK
5	SERIAL DATA
6	POWER ON Ⓛ
7	REG 12.7V
8	SYSTEM CTL BACK UP

P2002 (TO OPERATION)

1	SLOW TRACKING VR ⊖
2	SLOW TRACKING VR ⊕
3	TRACKING VR
4	PICTURE CTL
5	EXCEPT REC 5V
6	GND
7	REG 12V
8	REG 5V

DIRECT JUMPER

(TO TIMER)

3T	VTR Ⓗ
3R	SAFETY TAB
30	D. REC

(TO SUB SERVO)

5T	SLP Ⓗ
5R	REG 5V
50	SYSTEM CTL 5V
5Y	VSS BRANCH
5P	LP SLOW TRACKING

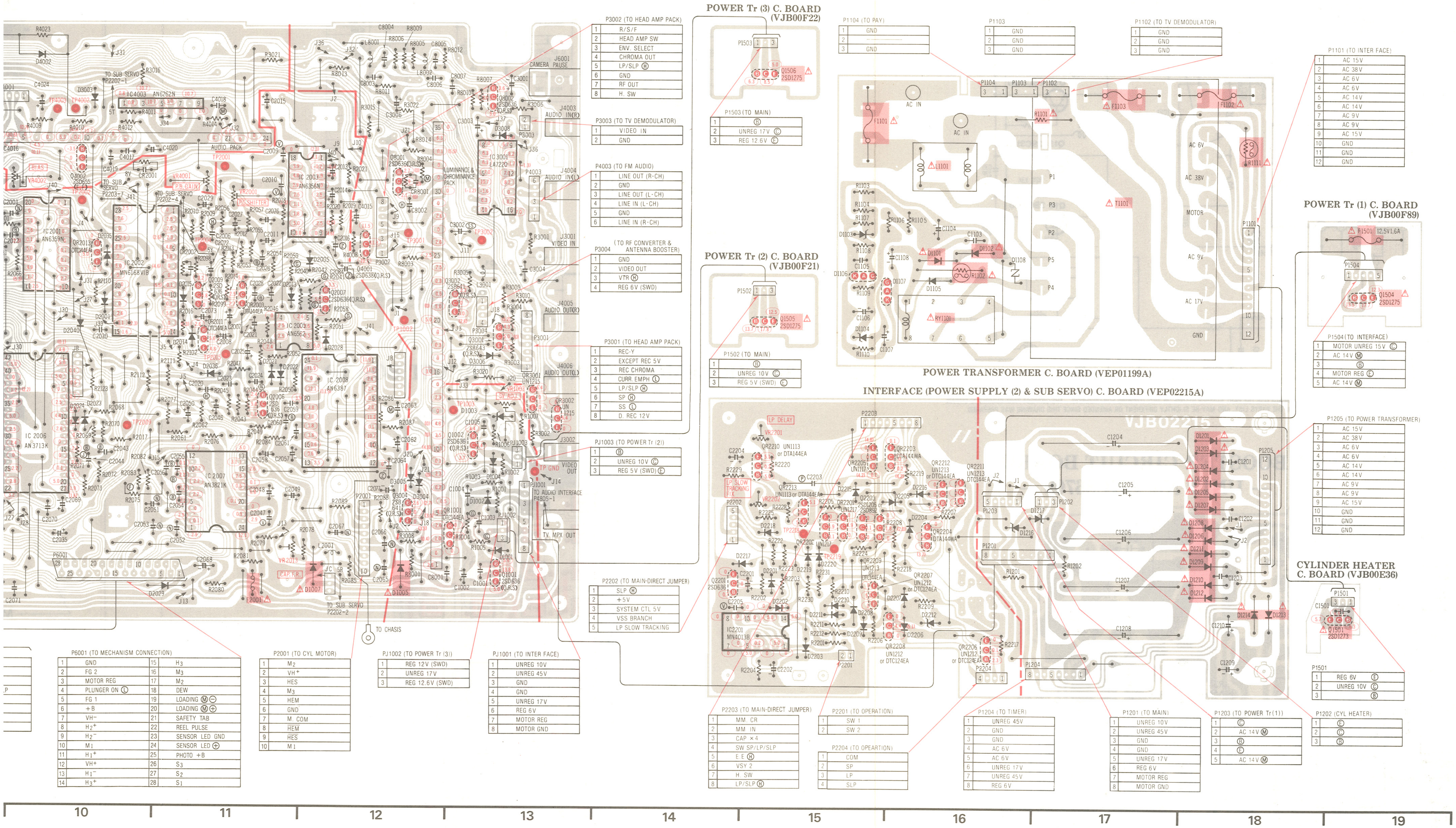
(TO SUB SERVO)

8T	MM. CR
8R	MM. IN
80	CAP ×4
8Y	SW SP/LP/SLP
8P	E.E Ⓗ
8A	VSY 2
8V	H. SW
8N	LP/SLP Ⓗ

P6001 (TO MECHANISM CONNECTION)

1	GND	15	H_3
2	FG 2	16	M_3
3	MOTOR REG	17	M_2
4	PLUNGER ON Ⓛ	18	DEW
5	FG 1	19	LOADING Ⓜ
6	+B	20	LOADING Ⓜ
7	VH−	21	SAFETY TAB
8	H_2^+	22	REEL PULSE
9	H_2^-	23	SENSOR LE
10	M_1	24	SENSOR LE
11	H_1^+	25	PHOTO +B
12	VH+	26	S_3
13	H_1^-	27	S_2
14	H_3^+	28	S_1

Back Page:
RF CONVERTER IR REMOTE CONTROL &
CIRCUIT BOARD LAYOUT Section


POWER Tr (3) C. BOARD (VJB00F22)
POWER Tr (2) C. BOARD (VJB00F21)
POWER Tr (1) C. BOARD (VJB00F89)
POWER TRANSFORMER C. BOARD (VEP01199A)
INTERFACE (POWER SUPPLY (2) & SUB SERVO) C. BOARD (VEP02215A)
CYLINDER HEATER C. BOARD (VJB00E36)
P3002 (TO HEAD AMP PACK)
R/S/F
HEAD AMP SW
ENV. SELECT
CHROMA OUT
LP/SLP Ⓗ
GND
RF OUT
H. SW
P3003 (TO TV DEMODULATOR)
VIDEO IN
GND
P4003 (TO FM AUDIO)
LINE OUT (R-CH)
GND
LINE OUT (L-CH)
LINE IN (L-CH)
GND
LINE IN (R-CH)
P3004 (TO RF CONVERTER & ANTENNA BOOSTER)
GND
VIDEO OUT
VTR Ⓗ
REG 6V (SWD)
P3001 (TO HEAD AMP PACK)
REC-Y
EXCEPT REC 5V
REC CHROMA
CURR. EMPH Ⓛ
LP/SLP Ⓗ
SP Ⓗ
SS Ⓛ
D. REC 12V
PJ1003 (TO POWER Tr (2))
Ⓑ
UNREG 10V Ⓒ
REG 5V (SWD) Ⓒ
P1503 (TO MAIN)
UNREG 17V Ⓒ
REG 12.6V Ⓒ
P1502 (TO MAIN)
UNREG 10V Ⓒ
REG 5V (SWD) Ⓒ
P1104 (TO PAY)
P1103
P1102 (TO TV DEMODULATOR)
P1101 (TO INTER FACE)
AC 15V
AC 38V
AC 6V
AC 6V
AC 14V
AC 14V
AC 9V
AC 9V
AC 15V
GND
GND
GND
P1504 (TO INTERFACE)
MOTOR UNREG 15V Ⓒ
AC 14V Ⓜ
MOTOR REG Ⓔ
AC 14V Ⓜ
P1205 (TO POWER TRANSFORMER)
P1501
REG 6V Ⓔ
UNREG 10V Ⓒ
P2202 (TO MAIN-DIRECT JUMPER)
SLP Ⓗ
+5V
SYSTEM CTL 5V
VSS BRANCH
LP SLOW TRACKING
P6001 (TO MECHANISM CONNECTION)
GND
FG 2
MOTOR REG
PLUNGER ON Ⓛ
FG 1
+B
VH−
H2+
H2−
M1
H1+
VH+
H1−
H3+
H3
M3
M2
DEW
LOADING Ⓜ⊖
LOADING Ⓜ⊕
SAFETY TAB
REEL PULSE
SENSOR LED GND
SENSOR LED ⊕
PHOTO +B
S3
S2
S1
P2001 (TO CYL MOTOR)
M2
VH+
HES
M3
GND
HEM
M. COM
HEM
HES
M1
PJ1002 (TO POWER Tr (3))
REG 12V (SWD)
UNREG 17V
REG 12.6V (SWD)
PJ1001 (TO INTER FACE)
UNREG 10V
UNREG 45V
GND
GND
UNREG 17V
REG 6V
MOTOR REG
MOTOR GND
P2203 (TO MAIN-DIRECT JUMPER)
MM. CR
MM. IN
CAP ×4
SW SP/LP/SLP
E.E Ⓗ
VSY 2
H. SW
LP/SLP Ⓗ
P2201 (TO OPERATION)
SW 1
SW 2
P2204 (TO OPERATION)
COM
SP
LP
SLP
P1204 (TO TIMER)
UNREG 45V
GND
GND
AC 6V
AC 6V
UNREG 17V
UNREG 45V
REG 6V
P1201 (TO MAIN)
UNREG 10V
UNREG 45V
GND
GND
UNREG 17V
REG 6V
MOTOR REG
MOTOR GND
P1203 (TO POWER Tr (1))
AC 14V Ⓜ
AC 14V Ⓜ
P1202 (CYL HEATER)
10
11
12
13
14
15
16
17
18
19

POWER SUPPLY CIRCUIT BOARD	
Transistor	
Q1001	B-13
Q1002	C-13
Q1501	B-19
Q1505	D-15
Q1506	F-15
Transistor & Resistor	
QR1001	B-12
Test Point	
TP1002	D-12
TP1003	C-13
TP GND	C-13
Adjustment	
VR1003	C-13

ADDRESS INFORMATION

SERVO CIRCUIT BOARD	
Transistor	
Q2001	D-9
Q2002	D-9
Q2003	D-8
Q2004	D-9
Q2005	D-8
Q2006	C-11
Q2007	D-12
Q2008	B-9
Q2009	D-11
Q2010	C-9
Q2011	C-9
Q2012	C-9
Transistor & Resistor	
QR2002	D-8
QR2003	D-11
QR2004	C-8
QR2005	D-8
QR2006	C-9
QR2007	D-9
QR2008	D-9
QR2010	C-9
QR2011	D-11
QR2012	D-8
QR2013	D-10
QR2014	B-9
Integrated Circuit	
IC2001	D-10
IC2002	D-10
IC2003	E-12
IC2004	D-8
IC2005	D-11
IC2006	C-10
IC2007	C-11
IC2008	C-12
Test Point	
TP2001	E-11
TP2002	E-10
TP2004	E-11
TP2008	E-8
TP2009	C-10
TP2012	E-8
TP2015	D-11
TP2018	D-8
TP2019	C-9
Adjustment	
VR2001	E-11
VR2002	E-9
VR2006	C-9
VR2009	B-8
VR2010	B-8
VR2011	C-8
VR2013	C-11

ADDRESS INFORMATION

SUB SERVO SECTION IN INTERFACE CIRCUIT BOARD	
Transistor	
Q2201	B-14
Q2203	B-15
Transistor & Resistor	
QR2201	B-15
QR2202	B-15
QR2203	C-16
QR2204	B-16
QR2205	C-15
QR2206	B-16
QR2207	B-15
QR2208	B-16
QR2209	B-15
QR2210	C-15
QR2211	C-16
QR2212	C-16
QR2213	C-15
Integrated Circuit	
IC2201	B-14
Test Point	
TP2018	B-15
TP2019	B-15
Adjustment	
VR2201	C-15
VR2202	C-15

ADDRESS INFORMATION

SYSTEM CONTROL CIRCUIT BOARD	
Transistor	
Q1502	C-2
Q1503	D-2
Q6001	C-7
Q6002	C-8
Q6003	E-7
Q6004	E-8
Q6005	E-9
Q6006	E-7
Q6007	E-8
Transistor & Resistor	
QR6001	D-6
QR6002	D-6
QR6003	D-7
QR6004	D-7
QR6005	C-7
Integrated Circuit	
IC1501	E-3
IC6001	E-6
IC6002	D-7
IC6003	C-6
IC6004	C-8
Test Point	
TP6001	D-6
TP6002	D-6
TP GND	D-6

ADDRESS INFORMATION

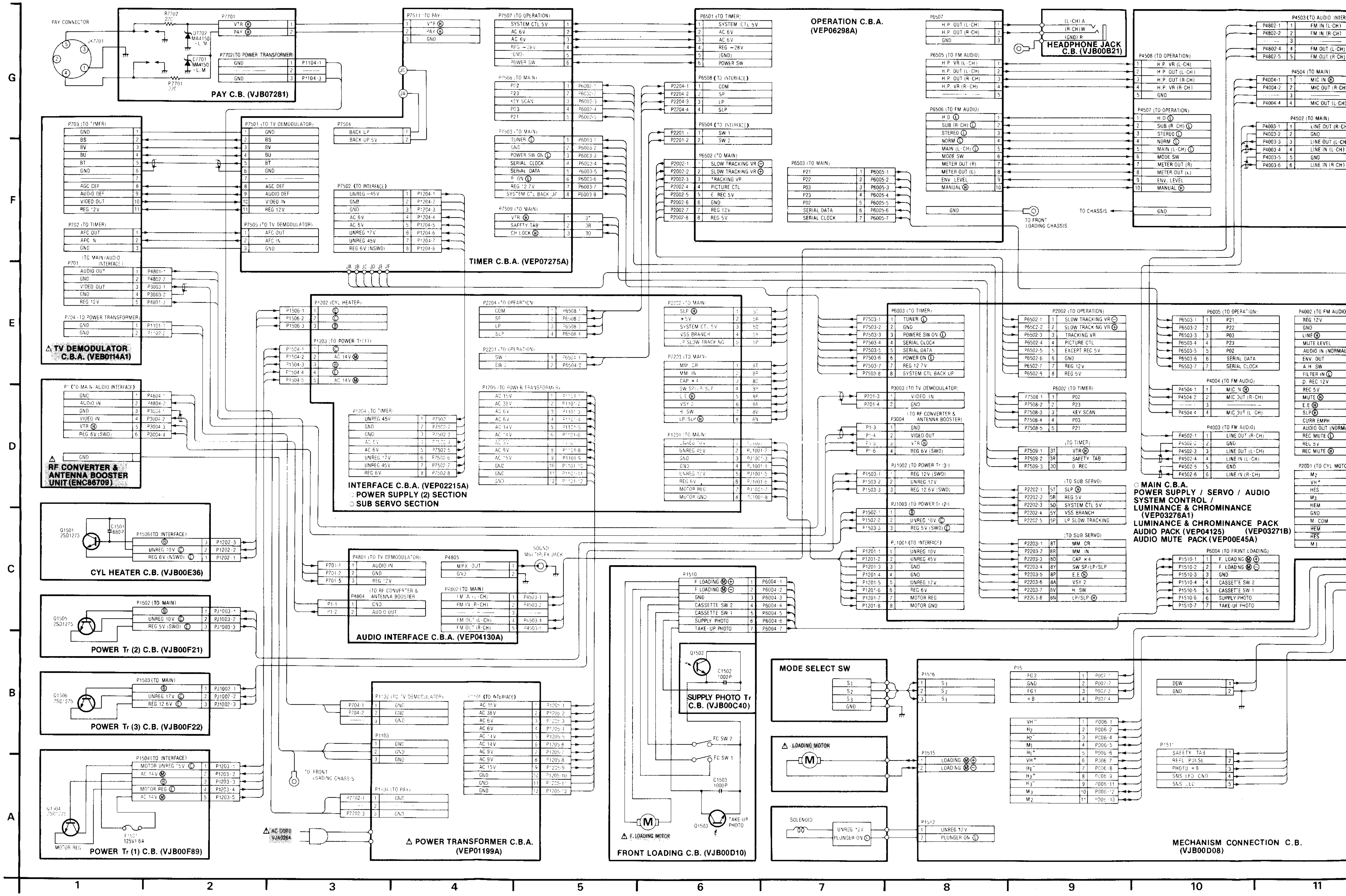
AUDIO CIRCUIT BOARD	
Transistor	
Q4001	E-12
Q4002	E-10
Q4003	E-9
Integrated Circuit	
IC4001	E-6
IC4002	E-8
IC4003	E-10
Test Point	
TP4002	E-10
TP4003	E-10
TP4511	E-8
TP4516	F-9
Adjustment	
VR4001	E-11
VR4002	E-10
VR4505	E-8
VR4510	E-9

ADDRESS INFORMATION

LUMINANCE & CHROMINANCE CIRCUIT BOARD	
Transistor	
Q3001	D-13
Q3002	D-12
Q3004	C-12
Q8001	E-12
Q8002	E-13
Transistor & Resistor	
QR3001	D-13
QR3002	C-13
QR3003	D-6
Integrated Circuit	
IC3001	E-13
Test Point	
TP3001	E-12
TP3002	E-13

ADDRESS INFORMATION

3-37. INTERCONNECTION SCHEMATIC DIAGRAM


G
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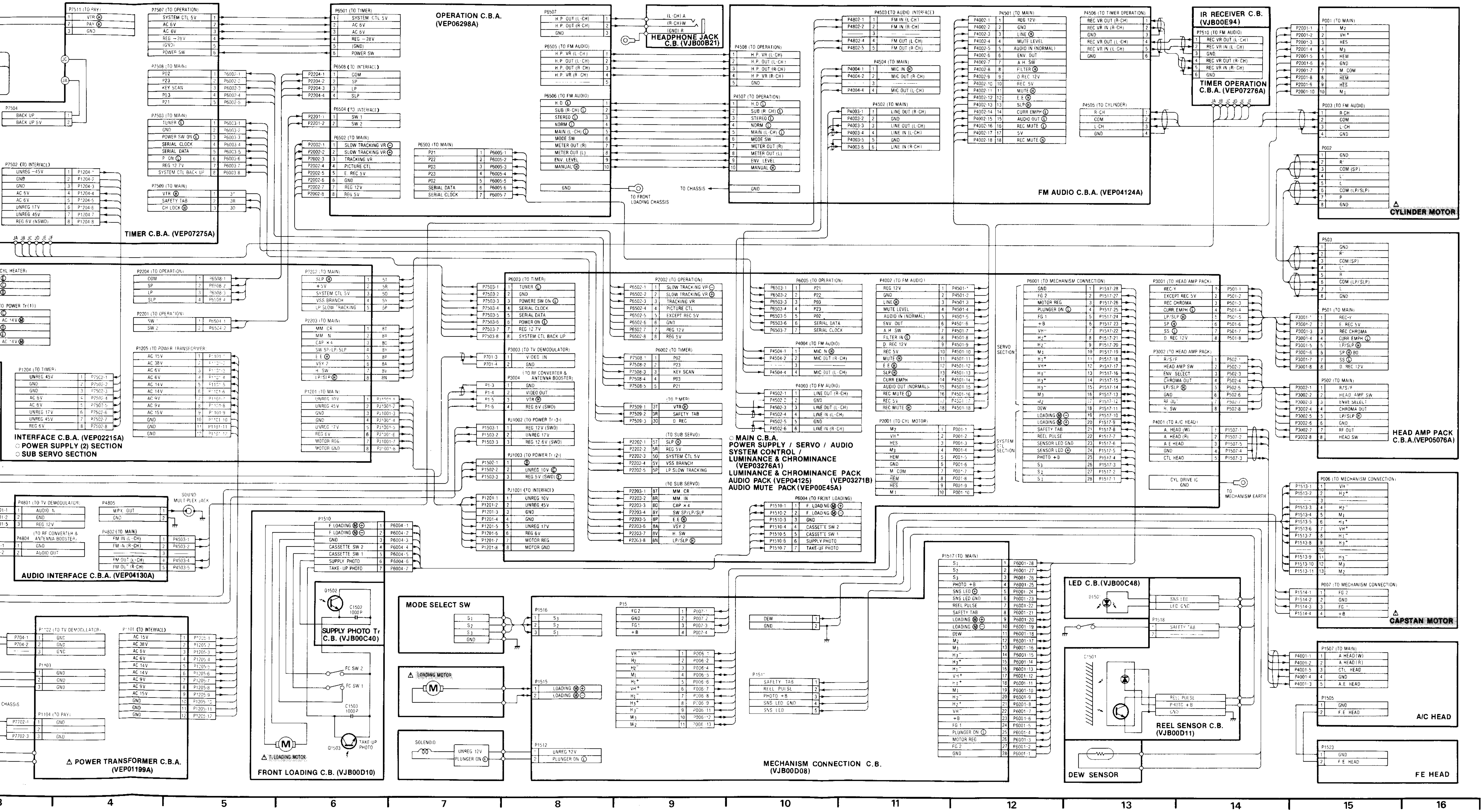
11
PAY CONNECTOR
PAY C.B. (VJB07281)
TIMER C.B.A. (VEP07275A)
OPERATION C.B.A. (VEP06298A)
HEADPHONE JACK C.B. (VJB00B21)
△ TV DEMODULATOR C.B.A. (VEB0114A1)
RF CONVERTER & ANTENNA BOOSTER UNIT (ENC86709)
INTERFACE C.B.A. (VEP02215A)
○ POWER SUPPLY (2) SECTION
○ SUB SERVO SECTION
○ MAIN C.B.A.
POWER SUPPLY / SERVO / AUDIO SYSTEM CONTROL / LUMINANCE & CHROMINANCE (VEP03276A1)
LUMINANCE & CHROMINANCE PACK
AUDIO PACK (VEP04125) (VEP03271B)
AUDIO MUTE PACK (VEP00E45A)
CYL HEATER C.B. (VJB00E36)
POWER Tr (2) C.B. (VJB00F21)
POWER Tr (3) C.B. (VJB00F22)
POWER Tr (1) C.B. (VJB00F89)
AUDIO INTERFACE C.B.A. (VEP04130A)
△ POWER TRANSFORMER C.B.A. (VEP01199A)
FRONT LOADING C.B. (VJB00D10)
SUPPLY PHOTO Tr C.B. (VJB00C40)
MODE SELECT SW
△ LOADING MOTOR
△ F. LOADING MOTOR
SOLENOID
MECHANISM CONNECTION C.B. (VJB00D08)
△ AC CORD VJA0264
TO FRONT LOADING CHASSIS
TO CHASSIS
SOUND MULTIPLEX JACK

EMATIC DIAGRAM


TIMER C.B.A. (VEP07275A)
OPERATION C.B.A. (VEP06298A)
HEADPHONE JACK C.B. (VJB00B21)
TO FRONT LOADING CHASSIS
TO CHASSIS
FM AUDIO C.B.A. (VEP04124A)
IR RECEIVER C.B. (VJB00E94)
TIMER OPERATION C.B.A. (VEP07276A)
CYLINDER MOTOR
INTERFACE C.B.A. (VEP02215A)
○ POWER SUPPLY (2) SECTION
○ SUB SERVO SECTION
○ MAIN C.B.A.
POWER SUPPLY / SERVO / AUDIO
SYSTEM CONTROL /
LUMINANCE & CHROMINANCE
(VEP03276A1)
LUMINANCE & CHROMINANCE PACK (VEP03271B)
AUDIO PACK (VEP04125)
AUDIO MUTE PACK (VEP00E45A)
SERVO SECTION
SYSTEM CTL SECTION
HEAD AMP PACK C.B.A.(VEP05076A)
TO MECHANISM EARTH
SOUND MULTI-PLEX JACK
AUDIO INTERFACE C.B.A. (VEP04130A)
POWER TRANSFORMER C.B.A. (VEP01199A)
FRONT LOADING C.B. (VJB00D10)
T. LOADING MOTOR
SUPPLY PHOTO Tr C.B. (VJB00C40)
TAKE-UP PHOTO
MODE SELECT SW
LOADING MOTOR
SOLENOID
MECHANISM CONNECTION C.B. (VJB00D08)
LED C.B. (VJB00C48)
REEL SENSOR C.B. (VJB00D11)
DEW SENSOR
CAPSTAN MOTOR
A/C HEAD
FE HEAD
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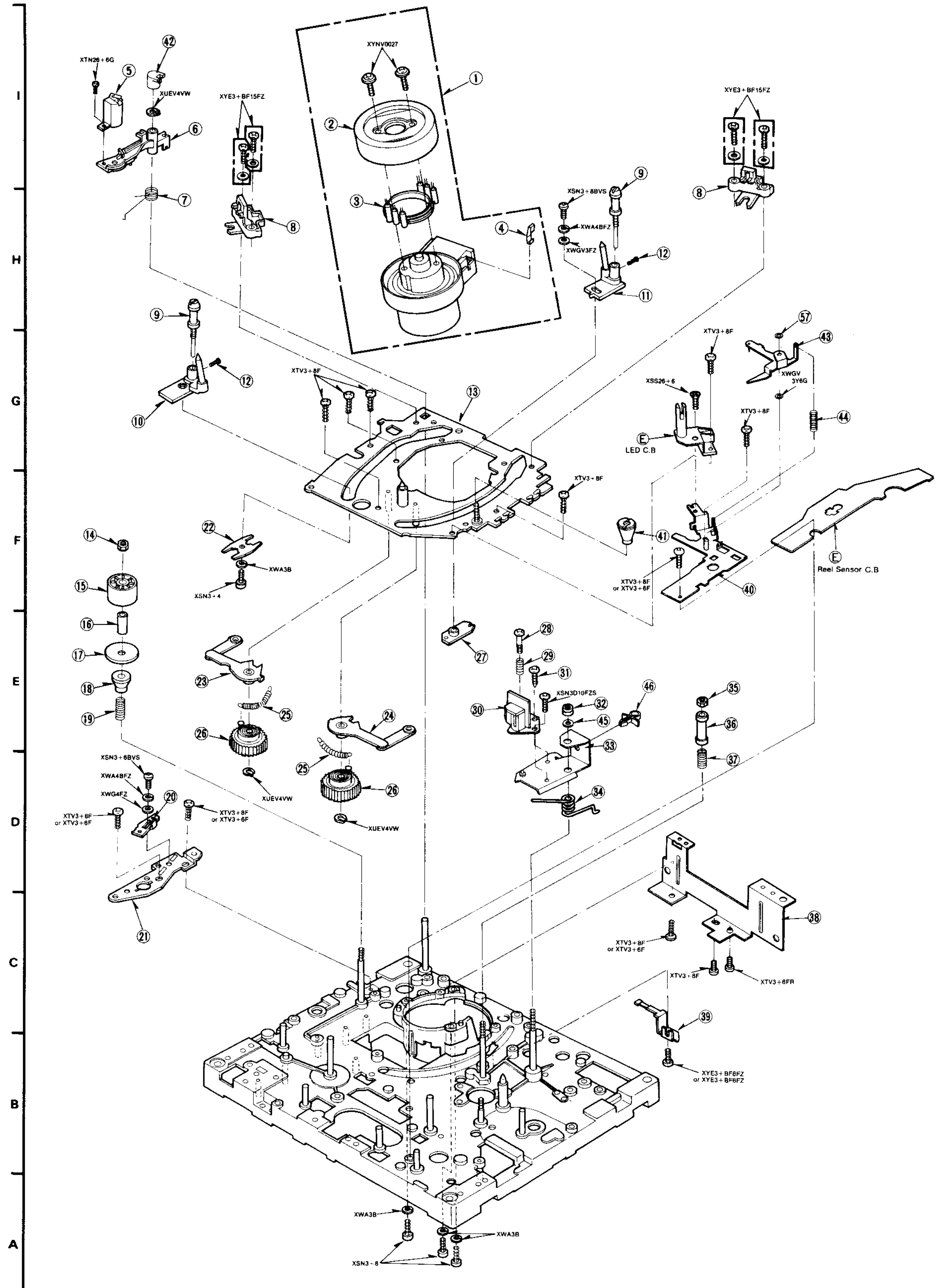
16

SECTION 4.
EXPLODED VIEWS AND PARTS LIST

4-1. EXPLODED VIEW

❶ TRANSPORT SECTION


I
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A
1
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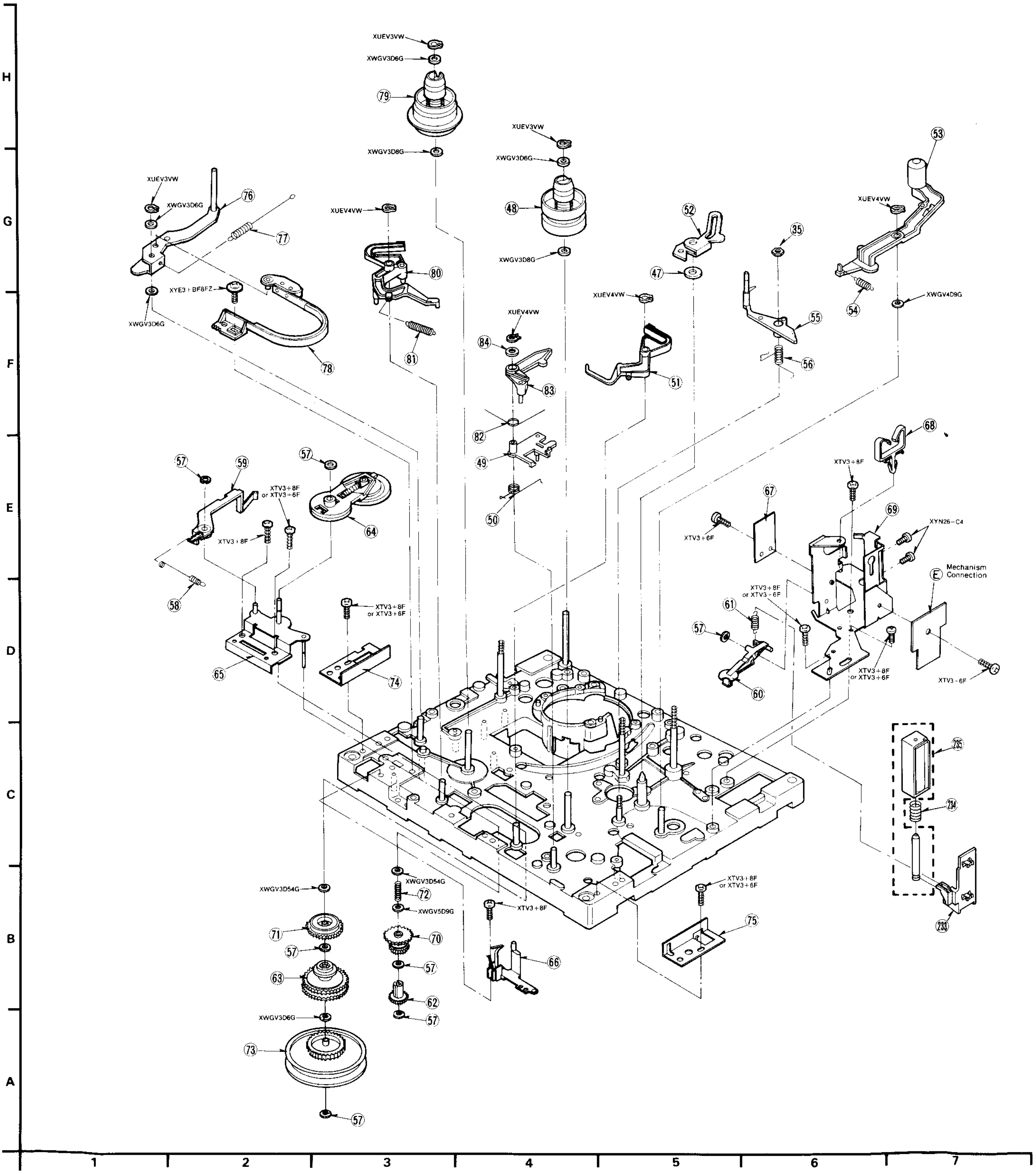
5
6
XTN26+6G
⑤
(42)
XUEV4VW
⑥
⑦
XYE3+BF15FZ
⑧
XYNV0027
①
②
③
④
XSN3+8BVS
⑨
XWA4BFZ
XWGV3FZ
⑫
⑪
XYE3+BF15FZ
⑧
⑨
⑫
⑩
XTV3+8F
⑬
XTV3+8F
(57)
(43)
XSS26+6
XWGV
3Y6G
XTV3+8F
(44)
Ⓔ
LED C.B
XTV3+8F
(41)
XTV3+8F
or XTV3+6F
(40)
Ⓔ
Reel Sensor C.B
⑭
⑮
⑯
⑰
⑱
⑲
(22)
XWA3B
XSN3+4
(23)
(25)
(26)
XUEV4VW
(24)
(25)
(26)
XUEV4VW
(27)
(28)
(29)
(31)
(30)
XSN3D10FZS
(32)
(45)
(46)
(33)
(34)
(35)
(36)
(37)
XSN3+6BVS
XWA4BFZ
XWG4FZ
⑳
XTV3+8F
or XTV3+6F
XTV3+8F
or XTV3+6F
(21)
(38)
XTV3+8F
or XTV3+6F
XTV3+8F
XTV3+6FR
(39)
XYE3+BF8FZ
or XYE3+BF6FZ
XWA3B
XWA3B
XSN3-8

❷ MOVING MECHANISM SECTION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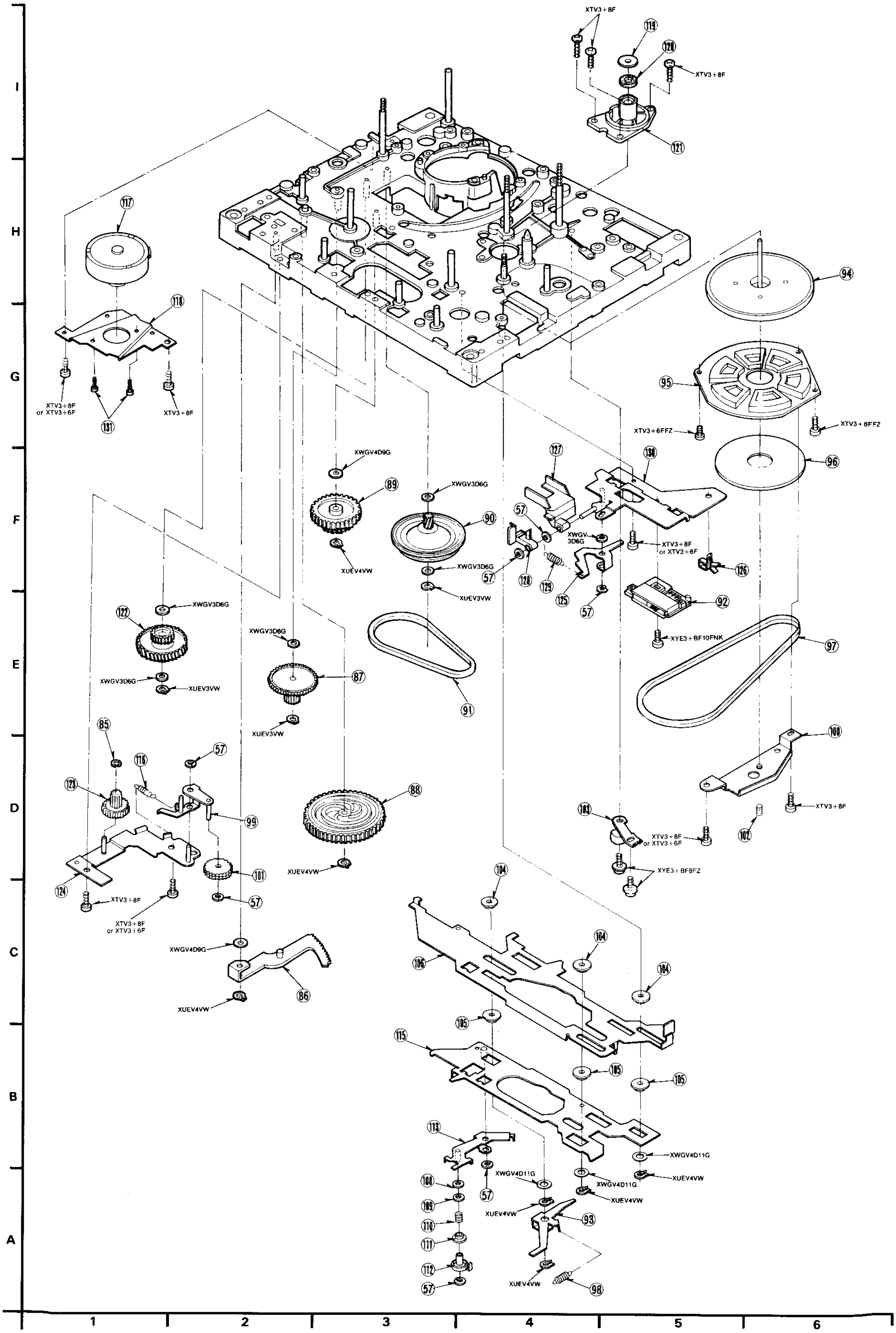
XUEV3VW
XWGV3D6G
(79)
XWGV3D8G
XUEV3VW
XWGV3D6G
㊽
XWGV3D8G
(53)
XUEV4VW
(54)
XWGV4D9G
XUEV3VW
XWGV3D6G
(76)
(77)
XYE3+BF8FZ
XWGV3D6G
(78)
XUEV4VW
(80)
(81)
XUEV4VW
(84)
(83)
(82)
㊾
㊿
(52)
㊼
㉟
(55)
(56)
XUEV4VW
(51)
(68)
XTV3+8F
(67)
XTV3+6F
(69)
XYN26-C4
Ⓔ Mechanism Connection
XTV3-6F
(61)
XTV3+8F or XTV3-6F
(57)
(60)
XTV3+8F or XTV3+6F
(57)
(59)
(57)
XTV3+8F or XTV3-6F
XTV3+8F
(64)
(58)
(65)
XTV3+8F or XTV3+6F
(74)
(235)
(234)
(233)
XWGV3D54G
XWGV3D54G
(72)
XWGV5D9G
(70)
(71)
(57)
(63)
(57)
(62)
(57)
XWGV3D6G
(73)
(57)
XTV3+8F
(66)
XTV3+8F or XTV3+6F
(75)

❸ CHASSIS PARTS SECTION



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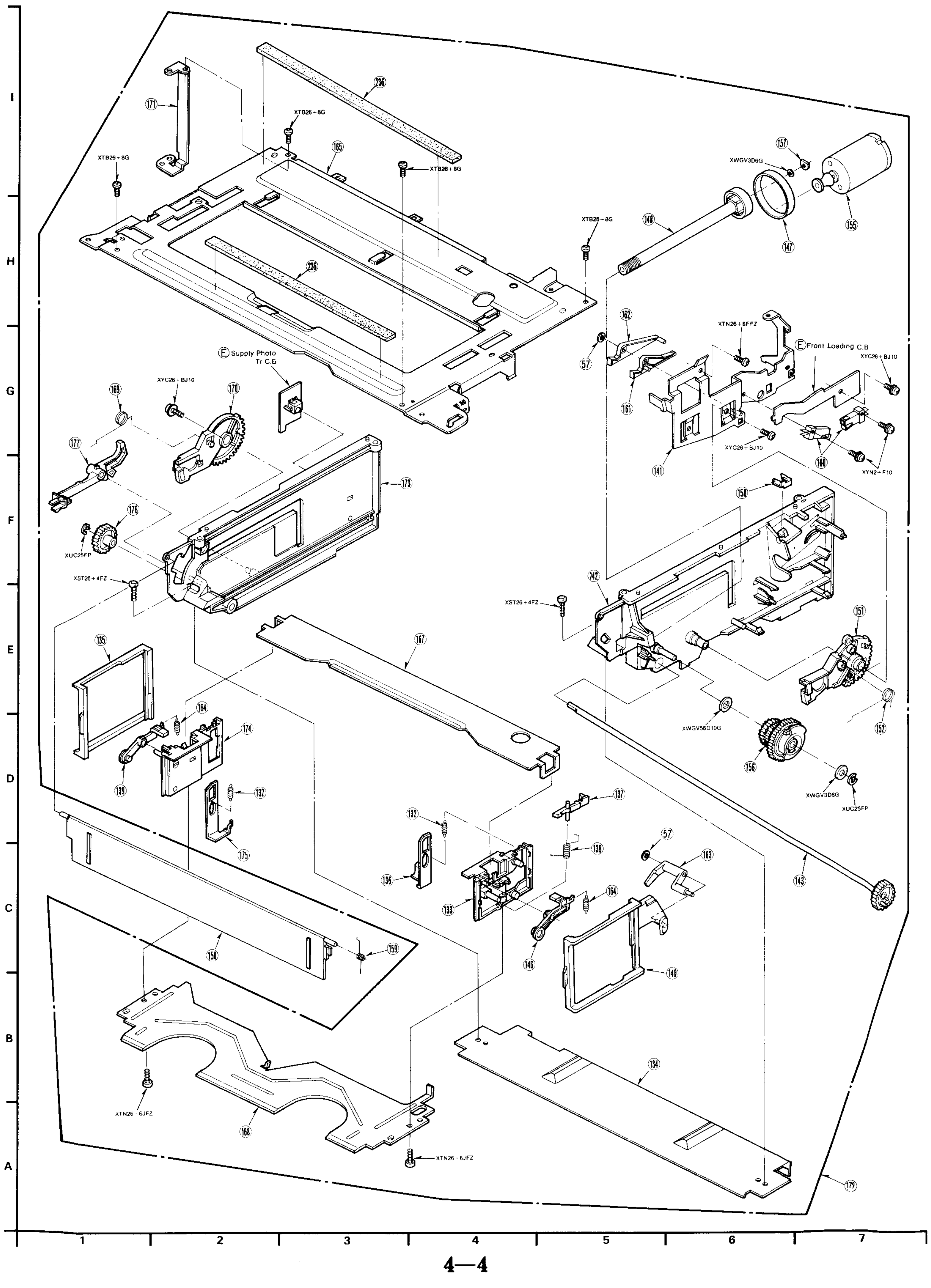
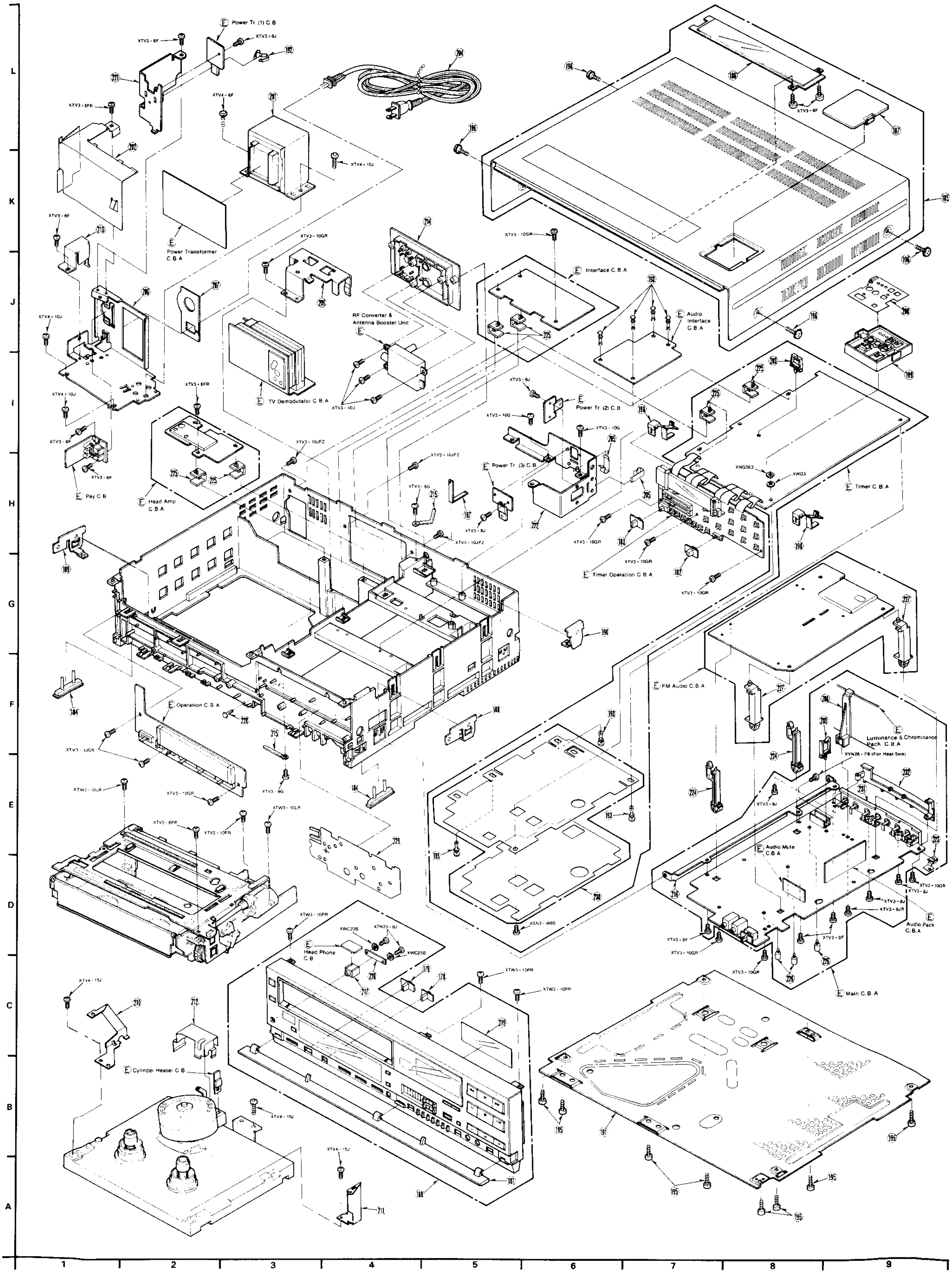
3
4
5
6
XTV3+8F
⑲
⑳
XTV3+8F
㉑
⑰
⑱
XTV3+8F
or XTV3+6F
⑬¹
XTV3+8F
94
95
XTV3+6FFZ
XTV3+6FFZ
96
XWGV4D9G
89
XUEV4VW
XWGV3D6G
90
XWGV3D6G
XUEV3VW
127
130
57
XWGV-
3D6G
XTV3+8F
or XTV3+6F
126
57
128
129
125
57
92
XYE3+BF10FNK
97
122
XWGV3D6G
XWGV3D6G
XUEV3VW
XWGV3D6G
87
XUEV3VW
91
85
116
57
123
99
88
XUEV4VW
100
XTV3+8F
103
XTV3+8F
or XTV3+6F
102
XYE3+BF8FZ
124
XTV3+8F
XTV3+8F
or XTV3+6F
101
57
104
XWGV4D9G
104
106
104
86
XUEV4VW
105
115
105
105
113
XWGV4D11G
XWGV4D11G
XUEV4VW
XWGV4D11G
XUEV4VW
108
109
57
110
111
XUEV4VW
93
112
57
XUEV4VW
98

❹ CASSETTE UP MECHANISM SECTION


I
H
G
F
E
D
C
B
A
1
2
3
4
5
6
7
171
236
XTB26+8G
165
XTB26+8G
XTB26+8G
236
XWGV3D6G
157
155
147
148
XTB26+8G
162
57
161
XTN26+6FFZ
Ⓔ Front Loading C.B
XYC26+BJ10
141
XYC26+BJ10
160
XYN2+F10
Ⓔ Supply Photo Tr C.B
169
XYC26+BJ10
170
177
173
176
XUC25FP
XST26+4FZ
158
142
XST26+4FZ
151
135
167
164
174
139
132
175
152
XWGV56D10G
156
XWGV3D6G
XUC25FP
137
132
136
133
138
57
163
164
146
140
143
150
159
134
XTN26-6JFZ
168
XTN26-6JFZ
179

❺ CASING PARTS SECTION


L
K
J
I
H
G
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
Ⓔ Power Tr. (1) C.B
XTV3 - 6F
XTV3 + 8J
192
204
221
XTV4 - 6F
201
XTV3 + 6FR
202
XTV4 + 10J
196
186
XTV3 - 6F
187
185
XTV3 - 6F
213
Ⓔ Power Transformer C.B.A
XTV3 - 10GR
214
209
207
206
XTV4 + 10J
RF Converter & Antenna Booster Unit
Ⓔ
Ⓔ TV Demodulator C.B.A
XTV3 - 10J
XTV3 - 10GR
Ⓔ Interface C.B.A
225
193
Ⓔ Audio Interface C.B.A
196
200
199
XTV4 + 10J
XTV3 + 6FR
XTV3 - 6F
XTV3 - 6F
225
225
Ⓔ Pay C.B
Ⓔ Head Amp C.B.A
XTV3 - 10JFZ
XTV3 - 10JFZ
XTV3 - 8G
215
197
Ⓔ Power Tr. (3) C.B
XTV3 - 8J
XTV3 - 10JFZ
XTV3 - 8J
Ⓔ Power Tr. (2) C.B
XTV3 - 10G
XTV3 - 10G
205
222
198
225
225
203
XNG3E3
XWG3
Ⓔ Timer C.B.A
205
XTV3 - 10GR
183
XTV3 + 10GR
182
Ⓔ Timer Operation C.B.A
XTV3 - 10GR
198
109
190
227
Ⓔ FM Audio C.B.A
227
184
Ⓔ Operation C.B.A
228
188
XTV3 - 10GR
215
XTV3 - 8G
184
XTV3 - 10GR
XTW3 - 10LR
XTV3 - 6FR
XTV3 - 10FR
XTW3 - 10LR
229
193
193
193
230
XSN3 - W8S
204
203
Ⓔ Luminance & Chrominance Pack C.B.A
XYN26 - F6 (For Heat Sink)
224
224
XTV3 - 8J
232
231
223
Ⓔ Audio Mute C.B.A
216
XTV3 + 10GR
XTV3 - 8J
XTV3 + 8J
XTV3 + 8JR
Ⓔ Audio Pack C.B.A
XTV3 + 8F
XTV3 - 10GR
XTV3 + 10GR
226
226
226
Ⓔ Main C.B.A
XTW3 - 10PR
XWC23B
XTN23 - 8J
Ⓔ Head Phone C.B
XWC23B
220
217
179
178
XTW3 - 10PR
XTW3 - 10PR
219
XTV4 - 15J
210
212
Ⓔ Cylinder Heater C.B
XTV4 - 15J
XTV4 - 15J
211
188
181
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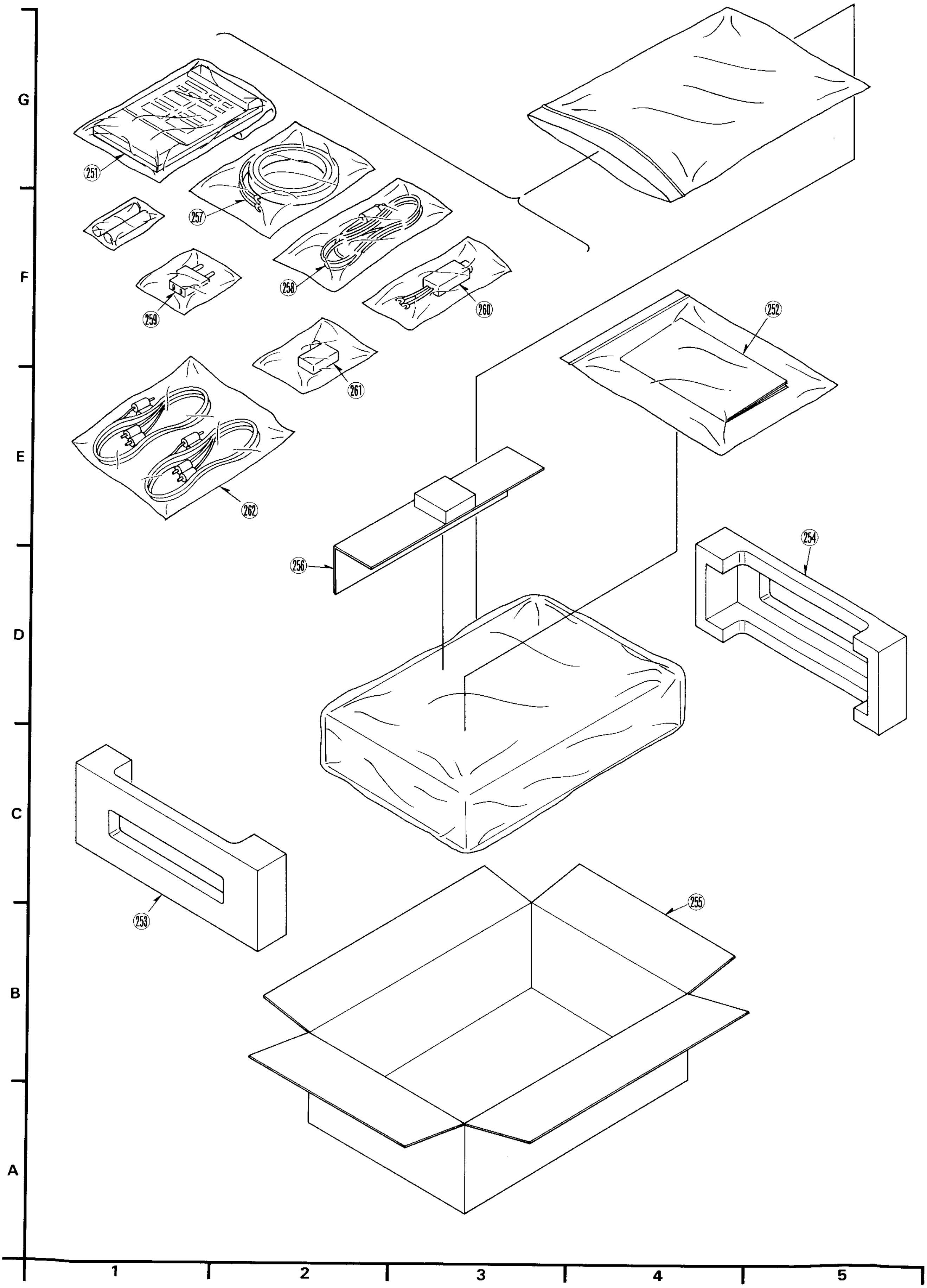
195

❻ PACKING PARTS SECTION



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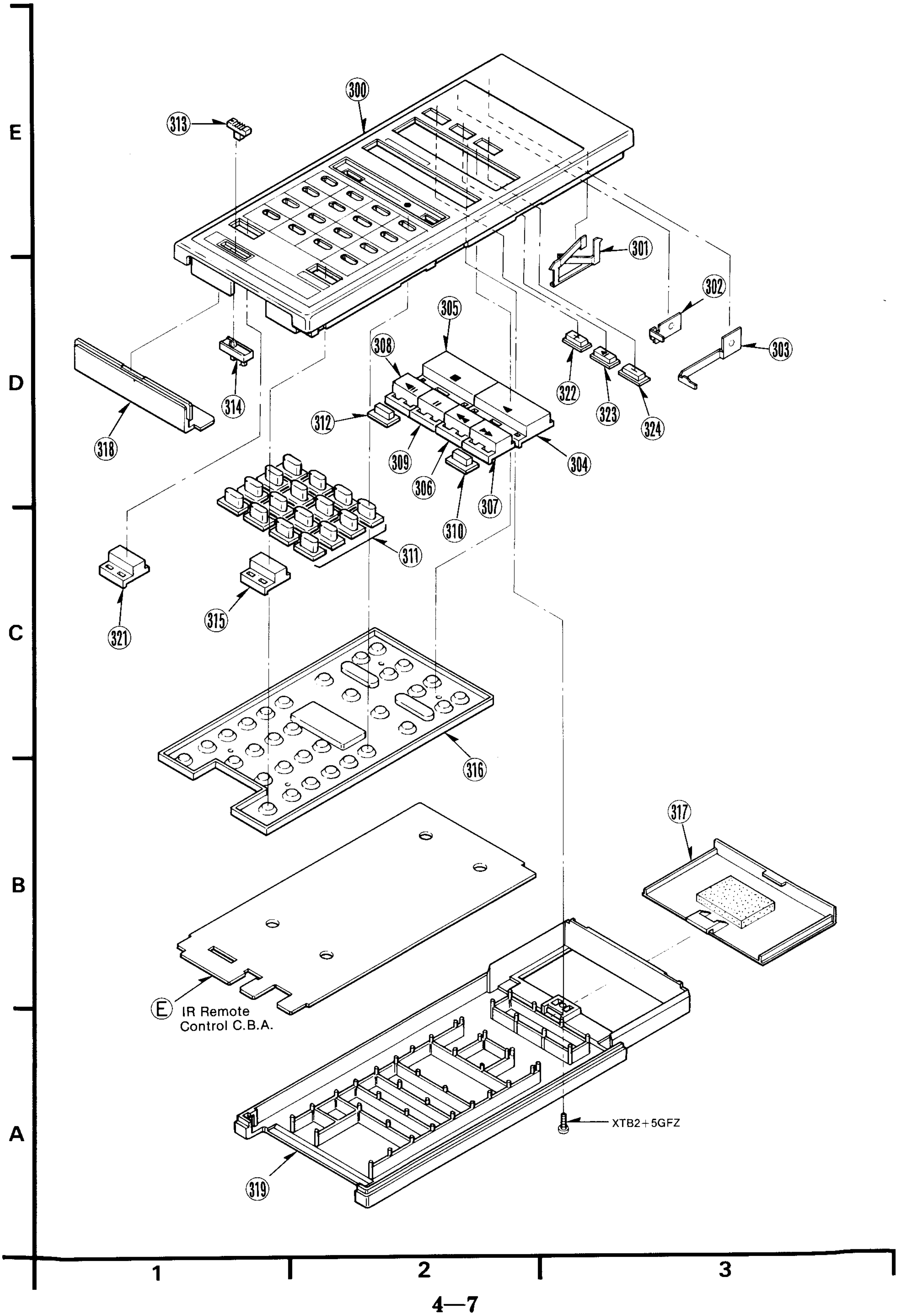
❼ REMOTE CONTROL UNIT



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Ⓔ IR Remote Control C.B.A.
XTB2+5GFZ
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Memo

ORDER NO. VRD-8505-125A
(Date of issue: JUL. 1985)

PARTS LIST

MODEL NO: NV-870PX

1. NV-870PX Mechanical Replacement Parts List

＊This parts list is detouchable from the manual.

Note: 1. * Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
Components identified with the mark <!> have the special characteristics for safety. When replacing any of these components, use only the same type.

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
1(1)		VEG0359	DD Cylinder Unit	1	<!>
2(1)		VEH0277	Upper Cylinder Unit	1	
3(1)		VJR0132	RT Terminal	1	
4(1)		VMC0049	Power Tr. Pressure Spring	1	
5(1)		VBS0027	FE Head	1	
6(1)		VML1544	FE Lever	1	
7(1)		VMB1005	FE Lever Spring	1	
8(1)		VMD0570	Post Stopper	2	
9(1)		VXP0302A	Roller Post Unit	2	
10(1)		VXA1964	Inclind Base (S) Unit	1	
11(1)		VXA1965	Inclind Base (T) Unit	1	
12(1)		VHD0133	Screw	2	
13(1)		VXA1963	Loading Base (1) Unit	1	
14(1)		VHD0045	Nut	1	
15(1)		VDP0908	Limiter Roller	1	
16(1)		VMX0541	Collar	1	
17(1)		VMX0456	Lower Limiter	1	
18(1)		VMX0663	Limiter Stand	1	
19(1)		VMB0754	P1 Spring	1	
20(1)		VMA6338	Position Adjustment Hook	1	
21(1)		VMA6358	Position Plate	1	
22(1)		VMA4436	Shaft Holder Stopper	1	
23(1)		VXL0753	Loading Arm (L) Unit	1	
24(1)		VXL1152	Loading Arm (R) Unit	1	
25(1)		VMB0669	Loading Spring	2	
26(1)		VXP0520	Loading Gear Unit	2	
27(1)		VXA1966	Inclind Adjustment Plate	1	
28(1)		VHD0054	Adjustment Screw	1	
29(1)		VMB1251	Spring	1	
30(1)		VEH0247	A/C Head	1	
31(1)		VHD0089B	Azimuth Adjustment Screw	1	
32(1)		VHN0038	Nylon Nut	1	
33(1)		VXA2160	Head Base Unit	1	
34(1)		VMB1189	A/C Height Spring	1	
35(1,2)		VHN0023	M3 Nylon Nut	2	
36(1)		VMX0647	Post Sleeve	1	
37(1)		VMB1235	P4 Spring	1	
38(1)		VMA6507	Chassis Bracket	1	
39(1)		VXS0059	Earth Plate Unit	1	
40(1)		VXA2155	Intermediate Angle (1)	1	
			Unit		
41(1)		VHN0031	X Adjustment Nut	1	
42(1)		VMD0646	Wire Holder	1	
43(1)		VXL1230	Idler Stopper Unit	1	
44(1)		VMB1293	Idler Stopper Spring	1	
45(1)		VMX0750	Spacer	1	
46(1)		VJF0254	Shield Clamper	1	
47(2)		VMX0749	Washer	1	
48(2)		VXR0119	Take-up Reel Table Unit	1	
49(2)		VML1610	Soft Brake Release Lever	1	
50(2)		VMB1290	Soft Brake Spring (A)	1	
51(2)		VXZ0189	T-Side Main Brake Unit	1	
52(2)		VML1617	P5 Pull Out Lever	1	
53(2)		VXL1209	Pressure Roller Lever	1	
			Unit		
54(2)		VMB1001	Pin Pressure Spring	1	
55(2)		VXL1243	P5 Arm	1	
56(2)		VMB1306	P5 Spring	1	
57(2,3,4)		VMX0653	Cut Washer	15	
58(2)		VMB1198	S-Soft Brake Spring	1	
59(2)		VXZ0184	S-Soft Brake Arm Unit	1	
60(2)		VXZ0185	Capstan Brake (A) Unit	1	
61(2)		VMB1302	Capstan Brake Arm Spring(2	1	
62(2)		VDG0189	Intermediate Gear (A)	1	
63(2)		VXP0600	Center Clutch Unit	1	
64(2)		VXP0521	Idler Arm Unit	1	
65(2)		VXA2153	FF Lever Base Unit	1	
66(2)		VES0262	Safety Switch Unit	1	
67(2)		VEK2302	Dew Sensor Unit	1	
68(2)		VJF0004	Wire Saddle	1	
69(2)		VXA2157	Dew Angle (1) Unit	1	
70(2)		VDG0188	Intermediate Gear (B)	1	
71(2)		VXP0599	Clutch Gear Unit	1	
72(2)		VMB1288	Intermediate Gear Lift	1	
			Spring		
73(2)		VDP0985	Clutch Pulley	1	
74(2)		VMA6465	Mount Plate (L)	1	
75(2)		VMA6466	Mount Plate (R)	1	
76(2)		VXL1157	Tension Arm (1) Unit	1	
77(2)		VMB1187	Tension Spring	1	
78(2)		VXZ0165	Tension Band Unit	1	
79(2)		VXR0118	Supply Reel Table Unit	1	
80(2)		VXZ0187	S-Side Main Brake Unit	1	
81(2)		VMB1289	Main Brake Spring	1	
82(2)		VMB1291	Soft Brake Spring (B)	1	
83(2)		VXZ0191	T-Soft Brake (1) Unit	1	
84(2)		VMX0743	Stopper Ring	1	
85(3)		VMX0521	Washer	1	
86(3)		VXL1168	Sector Gear Unit	1	
87(3)		VDG0145	Intermediate Gear	1	
88(3)		VDG0200	Cam Gear	1	
89(3)		VDG0143	Drive Gear (2)	1	
90(3)		VDG0177	Intermediate Pulley Gear	1	
91(3)		VDV0152	Loading Belt	1	
92(3)		VSS0110	Mode Select Switch	1	
			Unit		
93(3)		VML1618	Sub Clutch Release Arm	1	
94(3)		VXP0624	Capstan Rotor Unit	1	
95(3)		VEK2257	Capstan Stator Unit	1	<!>
96(3)		VXP0597	Capstan Pulley Unit	1	
97(3)		VDV0149	Capstan Belt	1	
98(3)		VMB1296	Sub Lever Spring	1	
99(3)		VXL1237	Sub Clutch Arm (1) Unit	1	
100(3)		VMA6504	Thrust Support Plate	1	
101(3)		VXP0601	Sub Clutch Unit	1	
102(3)		VMX0742	Thrust Screw	1	
103(3)		VEH0244	FG Head Unit	1	
104(3)		VMX0308	Slide Washer (D)	3	
105(3)		VMX0122	Slide Washer (A)	3	
106(3)		VXL1231	Main Lever Unit	1	
108(3)		VMX0672	Cut Washer	1	
109(3)		VMX0644	Washer	1	
110(3)		VMB1332	Clutch Spring	1	
111(3)		VDG0179	Clutch Gear (1)	1	
112(3)		VDG0180	Clutch Gear (2)	1	
113(3)		VXL1235	Kick Arm (1) Unit	1	
115(3)		VXL1233	Sub Lever (1) Unit	1	
116(3)		VMB1294	Sub Clutch Arm Spring	1	
117(3)		VEM0211	Loading Motor	1	<!>
118(3)		VMA6460	Loading Motor Bracket	1	
119(3)		VMX0251	Oil Seal	1	
120(3)		VMD0104	Oil Pool	1	
121(3)		VXD0092	Housing Unit	1	
122(3)		VDG0146	Intermediate Gear	1	
123(3)		VDG0178	Kick Gear	1	
124(3)		VXA2162	Sub Clutch Base (1) Unit	1	
125(3)		VML1615	Select Arm (A)	1	
126(3)		VJF0013	Miniature Clamper	1	
127(3)		VML1616	Select Arm (B)	1	
128(3)		VML1624	Select Pressure Lever	1	
129(3)		VMB1295	Select Arm Spring	1	
130(3)		VXA2158	Switch Base Unit	1	
131(3)		VHD0146	Screw	2	
132(4)		VMB1256	Safety lever Spring	2	
133(4)		VXA2199	Holder Guide (R) 1 Unit	1	
134(4)		VMA6511	Cassette Guide Unit	1	
135(4)		VMD0634	Slider (L)	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
136(4)		VMM0139	Safety Lever (R)	1	
137(4)		VML1585	Release Lever	1	
138(4)		VMB1259	Release Lever Spring	1	
139(4)		VXL1246	Pressing Lever (L) Unit	1	
140(4)		VXA2169	Slider (R) 1 Unit	1	
141(4)		VXA2174	Switch Bracket (1) Unit	1	
142(4)		VXA2172	Side Plate (R) 1 Unit	1	
143(4)		VXP0591	Main Shaft Unit	1	
146(4)		VXL1247	Pressing Lever (R) Unit	1	
147(4)		VDV0153	Slot-In Belt	1	
148(4)		VXP0606	Worm Shaft Unit	1	
150(4)		VKF0588	Blinder Panel	1	
151(4)		VML1619	Wiper Arm (R)	1	
152(4)		VMB1300	Wiper Spring (R)	1	
155(4)		VEM0218	Front Loading Motor	1	<!>
156(4)		VXP0604	Worm Wheel Unit	1	
157(4)		VDB0739	Worm Shaft Angle	1	
158(4)		VMD0648	Worm Stopper	1	
159(4)		VMB1258	Blinder Spring	1	
160(4)		VSM0049	Skelton Switch	2	
161(4)		VML1622	Switch Lever A	1	
162(4)		VML1623	Switch Lever B	1	
163(4)		VXL1238	Cassette Openner Unit	1	
164(4)		VMB1257	Pressing Lever Spring	2	
165(4)		VMA6512	Top Plate	1	
167(4)		VXA2181	Holder Angle Unit	1	
168(4)		VMA6513	Cassette Holder	1	
169(4)		VMB1301	Wiper Spring (L)	1	
170(4)		VML1620	Wiper Arm (L)	1	
171(4)		VSC1260	Shield Bracket (L)	1	
172(4)		VXA2163	Cassette Up Unit	1	
173(4)		VMD0662	Side Plate (L)	1	
174(4)		VXA2200	Holder Guide (L) 1 Unit	1	
175(4)		VMM0140	Safety Lever (L)	1	
176(4)		VDG0172	Shaft Gear	1	
177(4)		VML1625	Front Opener Lever	1	
178(5)		VGU1854	AGC Knob	1	
179(5)		VGU1840	Audio level Select Knob	1	
180(5)		VYP1376	Front Panel Unit	1	
181(5)		VYF0673	Timer Door Unit	1	
182(5)		VGU1830	Timer Rec Knob	1	
183(5)		VGU1781	Function Select Knob	1	
184(5)		VKA0026	Rubber Foot	2	
185(5)		VYP1401	Top Panel Unit	1	
186(5)		VKW0616	Smoke Board	1	
187(5)		VYF0674	Preset Cover Unit	1	
188(5)		VMP0463	Top Case Hold Angle (R)	1	
189(5)		VMP0464	Top Case Hold Angle (L)	1	
190(5)		VMP0442	Top Case Hold Angle	1	
191(5)		VKU0228	Bottom Plate	1	
192(5)		VMB0758	Spring	2	
193(5)		VHN0041	Rivet	7	
195(5)		VHD0059	Screw	8	
196(5)		VHD0165	Screw	4	
197(5)		VJF0139	AC Cord Band	1	
198(5)		VKC0128	Hinge (A)	2	
199(5)		VGQ0868	CH Preset Case	1	
200(5)		VGH0708	CH Preset Name Plate	1	
201(5)		VTP0152	Power Transformer	1	<!>
202(5)		VMZ0687	Power Transformer Barrier	1	<!>
203(5)		VJF0004	Clamp	2	
204(5)		VJA0264	AC Cord	1	<!>
205(5)		VMC0084	Spring	2	
206(5)		VMP0809	Power Transformer Angle	1	<!>
207(5)		VGH0713	Power Name Plate	1	
208(5)		VJF0227	Luminance & Chrominance	1	
			Pack Angle	1	
209(5)		VMP0492	Tuner Support Angle	1	
210(5)		VSC1175	Shield Angle (L)	1	
211(5)		VSC1174	Shield Angle (R)	1	
212(5)		VSC1287	Cylinder Shield Case	1	
213(5)		VMP0431	Power Transfomer Sub		
			Angle		
214(5)		VEJ0434	RF & Antenna Board	1	
215(5)		VJR3	Clamper	2	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
216(5)		VMP0432	Main Circuit Board Support	1	
			Angle		
217(5)		VEJ0379	Head Phone Jack	1	
219(5)		VKW0431	Timer Display Filter	1	
220(5)		VMA6673	Head Phone Jack Support	1	
			Angle		
221(5)		VSC1277	Heat Sink(L)	1	
222(5)		VSC1278	Heat Sink(R)	1	
223(5)		VMA6478	Earth Plate	1	
224(5)		VJF0244	FM Audio P.C. Board	2	
			Support		
225(5)		VKC0068	Hinge	4	
226(5)		VMX0549	Spacer	3	
227(5)		VKC0141	FM Audio Hinge	2	
228(5)		VJF0209	Clip	1	
229(5)		VXA2260	Timer Shield Unit	3	
230(5)		VXA2198	Barrier Unit	1	
231(5)		VJH0351	Rear Jack Board	1	
232(5)		VEJ0439	Rear Jack Panel	1	
233(2)		VMM0141	Capstan Brake Lever	1	
234(2)		VMB1208	Capstan Brake Release	1	
			Spring		
235(2)		VSJ0067	Pause Solenoid	1	
236(4)		VMX0854	Top Cushion	2	
251(6)		VSQ0478	Remote Control Unit	1	
252(6)		VQF1539	Fan Bag Kit	1	<!>
253(6)		VPN1138	Cushion (L)	1	
254(6)		VPN1137	Cushion (R)	1	
255(6)		VPG2235	Packing Case	1	
256(6)		VPN1082	Top Pad	1	
257(6)		VJA0102	UHF Antenna Cable Set	1	
258(6)		VJA0147	F-type Cable	1	
259(6)		VJSS0070	Plug Adaptor	1	
260(6)		VSQ0055	Matching Box	1	
261(6)		VSQ0057	Antenna Plug	1	
262(6)		VFA0028	Audio Cable	1	
			Remote Control Unit		
300(7)		VYK1060	Top Case Unit	1	
301(7)		VJR0054	Electrode (Common)	1	
302(7)		VJR0056	Electrode (-)	1	
303(7)		VJR0055	Electrode (+)	1	
304(7)		VGU1204	Play Button	1	
305(7)		VGU1205	Stop Button	1	
306(7)		VGU1209	FF Button	1	
307(7)		VGU1208	Rew Button	1	
308(7)		VGU1207	F. Adv Button	1	
309(7)		VGU1206	Still Button	1	
310(7)		VGU1212	Rec Button	1	
311(7)		VGU1618	CH. Select Button	16	
312(7)		VGU1619	Rec Button (Sub)	1	
313(7)		VGU1213	Remote ON/OFF Button	1	
314(7)		VGQ0601	Button Holder	1	
315(7)		VGU1210	Power Button	1	
316(7)		VSP0150	Rubber Contact	1	
317(7)		VYF0464	Battery Cover Unit	1	
318(7)		VKW0393	Smoke Board	1	
319(7)		VYK1061	Bottom Case Unit	1	
321(7)		VGU1617	VTR/TV Button	1	
322(7)		VGU1613	Slow (+) Button	1	
323(7)		VGU1612	Slow Button	1	
324(7)		VGU1611	Slow (-) Button	1	

2. NV-870PX Electrical Replacement Parts List

Note:
1. * Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
   Components identified with the mark <!> have the special characteristics for safety. When replacing any of these components,use only the same type.
3. Unless otherwise specified,
   All resistors are in OHMS ,K=1,000 OHMS. All capacitors are in MICRO-FARADS(uf),P=uuF.
4. The P.C.Board units marked width'■'show below the main assembled parts.

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			Printed Circuit Board		
			Assembly		
		VEP01199A	Power Transformer C.B.A.	1	<!>
		VEP03276A1	Main (Power Supply,	1	Including the Lumi
			Servo, Luminance, Audio,		nance & Chrominance
			System Control &		Pack C.B.A.
					(VEP03271B)
			Chrominance) C.B.A.		Audio Pack C.B.A.
					(VEP04125) & Audio
					Mute C.B.A.
					(VEP00E45A) <!>
		VEP03271B	Luminance & Chrominance	1	
			Pack C.B.A.		
		VEP04125	Audio Pack C.B.A.	1	
		VEP00E45A	Audio Mute Pack C.B.A.	1	
		VEP02215A	Interface (Power Supply	1	
			(2) & Sub Servo) C.B.A.		
		VEP04124A	FM Audio C.B.A.	1	
		VEP04130A	Audio Interface C.B.A.	1	
		VEP05076A	Head Amp C.B.A.	1	
		VEP06298A	Operation C.B.A.	1	
		VEP07275A	Timer C.B.A.	1	
		VEP07276A	Timer Operation C.B.A.	1	Including the IR
					Receiver C.B.(VJB00E
					94)
		VEB0114A1	TV Demodulator C.B.A.	1	
		ENC86709	RF Converter & Antenna	1	<!>
			Booster Unit		
		VJB07281	Pay C.B.	1	
		VJB00B21	Head Phone Jack C.B.	1	
		VJB00C40	Supply Photo Tr C.B.	1	
		VJB00C48	LED C.B.	1	
		VJB00D08	Mechanism Connection C.B.	1	
		VJB00D10	Front Loading C.B.	1	
		VJB00D11	Reel Sensor C.B.	1	
		VJB00E36	Cylinder Heater C.B.	1	
		VJB00E94	IR Receiver C.B.	1	
		VJB00F21	Power Tr. (2) C.B.	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
		VJB00F22	Power Tr. (3) C.B.	1	
		VJB00F89	Power Tr. (1) C.B.	1	
		VEP22039A	IR Remote Control C.B.A.	1	
T1101		VTP0152	Power Transformer	1	<!>
		WZTU18R0B	Contruction Tube	2	
F1101		XBA2C10NU0	Fuse 1.0A 250V	1	<!>
F1102		XBA1C16NU100	Fuse 1.6A 125V	1	<!>
F1103		XBA1C16NU100	Fuse 1.6A 125V	1	<!>
F1501		XBA1C16NU100	Fuse 1.6A 125V	1	<!>
		VJS0039	Fuse Holder	2	
	■	VEP01199A	POWER TRANSFORMER C.B.A.		<!>
			DIODES		
D1101		D1R100F9		1	<!>
D1102		D1R100		1	<!>
D1103		MA4130		1	
D1104		MA4180ML		1	
D1105		D1R100		1	
D1106		M21CA-Q		1	
D1107		03P5MG		1	
D1108		ERZC07DK471U		1	
			RESISTORS		
R1101		ERC12ZGK275	SOLID 1/2W 2.7M	1	<!>
R1102		ERQ12HUJ101	FUSE 1/2W 100	1	<!>
R1103		ERG1ANJ563	METAL 1W 56K	1	
R1104		ERG1ANJ563	METAL 1W 56K	1	
R1105		ERG1ANJ563	METAL 1W 56K	1	
R1106		ERG1ANJ563	METAL 1W 56K	1	
R1107		ERDS2TJ123	12K	1	
R1108		ERDS2TJ102	1K	1	
R1109		ERDS2TJ101	100	1	
R1110		ERDS2TJ222	2.2K	1	
R1111		ERD2FCJ4R7	FUSE 1/2W 4.7	1	<!>
			CAPACITORS		
C1103		ECKD3A102KBN	CERAMIC 1KV 1000P	1	
C1104		ECEA2WS010	ELECTROLYTIC 450V 1	1	
C1105		ECKF1H1032F	CERAMIC 50V 0.01	1	
C1106		ECEA1JU470	ELECTROLYTIC 63V 47	1	
C1107		ECEA1CU330	ELECTROLYTIC 16V 33	1	
C1108		ECEA2WS010	ELECTROLYTIC 450V 1	1	
			COIL		
L1101		VTQ0018		1	<!>
			RELAY		
RY1101		VSY2043		1	<!>

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			CONNECTORS		
P1101		VJP1147	12P	1	
P1102		VJP1142	3P	1	
P1103		VJP1142	3P	1	
P1104		VJP1142	3P	1	
			MISCELLANEOUS		
		VJS0039	FUSE HOLDER	6	<!>
		TEL312	AC CORD TERMINAL	2	<!>
	■	VEP03276A1	MAIN (POWER SUPPLY, SERVO,		INCLUDING THE LUMINAN
			LUMINANCE, AUDIO, SYSTEM		CE & CHROMINANCE PACK
			CONTROL & CHROMINANCE)		C.B.A., AUDIO PACK
			C.B.A.		C.B.A. & AUDIO MUTE
					C.B.A.
			(POWER SUPPLY SECTION)		
			TRANSISTORS		
Q1001		2SD636		1	(Q,R,S,)
Q1002		2SD636		1	(Q,R,S,)
			COMBINATION PART		
			(TRANSISTORS & RESISTOR)		
QR1001		DTC144EA		1	OR UN1213
			DIODES		
D1001		MA165		1	OR 1SS119,1SS133
D1002		MA165		1	OR 1SS119,1SS133
D1003		MA4039		1	
D1004		MA165		1	OR 1SS119,1SS133
D1005		10E1		1	<!>
D1006		10E1		1	<!>
D1007		10E1		1	<!>
			RESISTORS		
R1001		ERDS2TJ103	10K	1	
R1002		ERDS2TJ103	10K	1	
R1003		ERDS2TJ103	10K	1	
R1004		EROS2CKG2201	METAL 2.2K	1	
R1005		EROS2CKG2701	METAL 2.7K	1	
R1006		ERDS2TJ561	560	1	
R1007		ERDS2TJ123	12K	1	
			VARIABLE RESISTOR		
VR1003		EVNK6AA00B53	VARIABLE 5K	1	
			CAPACITORS		
C1001		ECKF1H102KB	CERAMIC 50V 1000P	1	
C1002		ECEA0JK470	ELECTROLYTIC 6.3V 47	1	
C1003		ECEA1CU330	ELECTROLYTIC 16V 33	1	
C1004		ECEA1VU101	ELECTROLYTIC 35V 100	1	
C1005		ECKF1H102KB	CERAMIC 50V 1000P	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			(SERVO SECTION)		
			INTEGRATED CIRCUITS		
IC2001		AN6359N		1	
IC2002		MN6168VIB		1	
IC2003		AN6356N		1	
IC2004		BA236B		1	OR BA236
IC2005		AN6562		1	OR UPC358C
IC2006		AN3713K		1	
IC2007		AN3821K		1	
IC2008		AN6387		1	
			TRANSISTORS		
Q2001		2SB641		1	(Q,R,S)
					OR 2SA937M (Q,R,S)
Q2002		2SB641		1	(Q,R,S)
					OR 2SA937M (Q,R,S)
Q2003		2SD636		1	(Q,R,S)
Q2004		2SD636		1	(Q,R,S)
Q2005		2SD636		1	(Q,R,S)
Q2006		2SD636		1	(Q,R,S)
Q2007		2SD636		1	(Q,R,S)
Q2008		2SD636		1	(Q,R,S)
Q2009		2SD636		1	(Q,R,S)
Q2010		2SD973		1	(R,S)
Q2011		2SD973		1	(R,S)
Q2012		2SD973		1	(R,S)
			COMBINATION PARTS		
			(TRANSISTOR & RESISTOR)		
QR2002		DTC144EA		1	OR UN1213
QR2003		DTA144EA		1	OR UN1113
QR2004		DTC144EA		1	OR UN1213
QR2005		DTC144EA		1	OR UN1213
QR2006		DTC144EA		1	OR UN1213
QR2007		DTC144EA		1	OR UN1213
QR2008		DTC144EA		1	OR UN1213
QR2010		DTA144EA		1	OR UN1113
QR2011		DTC144EA		1	OR UN1213
QR2012		DTC144EA		1	OR UN1213
QR2013		DTC144EA		1	OR UN1213
QR2014		DTA144EA		1	OR UN1113
			DIODES		
D2001		MA165		1	OR 1SS119,1SS133
D2002		MA165		1	OR 1SS119,1SS133
D2003		MA165		1	OR 1SS119,1SS133
D2004		MA165		1	OR 1SS119,1SS133
D2005		MA165		1	OR 1SS119,1SS133
D2006		MA165		1	OR 1SS119,1SS133
D2007		MA165		1	OR 1SS119,1SS133
D2008		MA165		1	OR 1SS119,1SS133
D2009		MA165		1	OR 1SS119,1SS133
D2010		MA165		1	OR 1SS119,1SS133
D2011		MA165		1	OR 1SS119,1SS133
D2012		MA165		1	OR 1SS119,1SS133
D2013		MA165		1	OR 1SS119,1SS133
D2014		MA165		1	OR 1SS119,1SS133
D2015		MA165		1	OR 1SS119,1SS133
D2017		MA165		1	OR 1SS119,1SS133
D2018		MA165		1	OR 1SS119,1SS133
D2019		MA165		1	OR 1SS119,1SS133
D2020		MA165		1	OR 1SS119,1SS133

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
D2021		MA165		1	OR 1SS119,1SS133
D2022		MA165		1	OR 1SS119,1SS133
D2023		MA165		1	OR 1SS119,1SS133
D2024		MA165		1	OR 1SS119,1SS133
D2025		MA165		1	OR 1SS119,1SS133
D2026		MA165		1	OR 1SS119,1SS133
D2028		MA165		1	OR 1SS119,1SS133
D2029		10E1		1	
D2030		MA165		1	OR 1SS119,1SS133
D2031		MA165		1	OR 1SS119,1SS133
D2032		MA165		1	OR 1SS119,1SS133
D2033		MA165		1	OR 1SS119,1SS133
D2034		MA165		1	OR 1SS119,1SS133
D2035		MA165		1	OR 1SS119,1SS133
D2036		MA165		1	OR 1SS119,1SS133
D2037		MA165		1	OR 1SS119,1SS133
D2038		MA165		1	OR 1SS119,1SS133
D2040		MA165		1	OR 1SS119,1SS133
			RESISTORS		
R2001		ERDS2TJ153	15K	1	
R2002		ERDS2TJ103	10K	1	
R2003		ERDS2TJ272	2.7K	1	
R2004		ERDS2TJ272	2.7K	1	
R2005		ERDS2TJ102	1K	1	
R2006		ERDS2TJ393	39K	1	
R2007		ERDS2TJ683	68K	1	
R2008		ERDS2TJ563	56K	1	
R2009		ERDS2TJ154	150K	1	
R2010		ERDS2TJ154	150K	1	
R2011		ERDS2TJ105	1M	1	
R2012		ERDS2TJ274	270K	1	
R2013		ERDS2TJ563	56K	1	
R2014		ERDS2TJ103	10K	1	
R2015		ERDS2TJ333	33K	1	
R2016		ERDS2TJ563	56K	1	
R2017		ERDS2TJ223	22K	1	
R2018		ERDS2TJ222	2.2K	1	
R2019		ERDS2TJ151	150	1	
R2020		ERDS2TJ153	15K	1	
R2021		ERDS2TJ223	22K	1	
R2022		ERDS2TJ563	56K	1	
R2023		ERDS2TJ333	33K	1	
R2024		ERDS2TJ473	47K	1	
R2025		ERDS2TJ124	120K	1	
R2026		ERDS2TJ103	10K	1	
R2027		ERDS2TJ473	47K	1	
R2028		ERDS2TJ563	56K	1	
R2029		ERDS2TJ103	10K	1	
R2030		ERDS2TJ124	120K	1	
R2031		ERDS2TJ103	10K	1	
R2032		ERDS2TJ103	10K	1	
R2033		ERDS2TJ183	18K	1	
R2034		ERDS2TJ473	47K	1	
R2035		ERDS2TJ103	10K	1	
R2036		ERDS2TJ103	10K	1	
R2037		ERDS2TJ333	33K	1	
R2038		ERDS2TJ473	47K	1	
R2039		ERDS2TJ272	2.7K	1	
R2040		ERDS2TJ224	220K	1	
R2041		EROS2CKG1802	METAL 18K	1	
R2042		EROS2CKG2702	METAL 27K	1	
R2043		ERDS2TJ103	10K	1	
R2044		ERDS2TJ333	33K	1	
R2045		ERDS2TJ103	10K	1	
R2046		ERDS2TJ103	10K	1	
R2047		ERDS2TJ472	4.7K	1	
R2048		ERDS2TJ102	1K	1	
R2049		ERDS2TJ332	3.3K	1	
R2050		ERDS2TJ473	47K	1	
R2051		ERDS2TJ823	82K	1	
R2052		ERDS2TJ105	1M	1	
R2053		ERDS2TJ154	150K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R2054		ERDS2TJ154	150K	1	
R2055		ERDS2TJ124	120K	1	
R2056		ERDS2TJ333	33K	1	
R2057		ERDS2TJ182	1.8K	1	
R2058		EROS2CKG2200	METAL 220	1	
R2059		EROS2CKG2201	METAL 2.2K	1	
R2060		ERDS2TJ222	2.2K	1	
R2061		ERDS2TJ822	8.2K	1	
R2062		ERDS2TJ223	22K	1	
R2064		ERDS2TJ103	10K	1	
R2065		ERDS2TJ563	56K	1	
R2066		ERDS2TJ273	27K	1	
R2067		ERDS2TJ181	180	1	
R2068		ERDS2TJ153	15K	1	
R2069		ERDS2TJ224	220K	1	
R2070		ERDS2TJ823	82K	1	
R2071		ERDS2TJ563	56K	1	
R2072		ERDS2TJ104	100K	1	
R2073		ERDS2TJ104	100K	1	
R2074		ERDS2TJ473	47K	1	
R2075		ERX12ANJ1R0	METAL 1/2W 1.0	1	OR ERX12SJ1R0
R2076		ERDS2TJ102	1K	1	
R2077		ERDS2TJ563	56K	1	
R2078		ERDS2TJ822	8.2K	1	
R2079		ERDS2TJ103	10K	1	
R2080		ERDS2TJ181	180	1	
R2081		ERDS2TJ224	220K	1	
R2082		ERDS2TJ224	220K	1	
R2083		ERDS2TJ224	220K	1	
R2084		ERDS2TJ104	100K	1	
R2085		ERDS2TJ150	15	1	
R2086		ERX12ANJR56	METAL 1/2W 0.56	1	OR ERX12SJR56
R2087		ERDS2TJ124	120K	1	
R2088		ERDS2TJ150	15	1	
R2089		ERDS2TJ150	15	1	
R2090		ERDS2TJ394	390K	1	
R2091		ERDS2TJ393	39K	1	
R2092		ERDS2TJ474	470K	1	
R2093		ERDS2TJ274	270K	1	
R2094		ERDS2TJ274	270K	1	
R2095		ERDS2TJ102	1K	1	
R2098		ERDS2TJ562	5.6K	1	
R2099		ERDS2TJ563	56K	1	
R2100		ERDS2TJ152	1.5K	1	
R2101		ERDS2TJ682	6.8K	1	
R2102		ERDS2TJ223	22K	1	
R2103		ERDS2TJ562	5.6K	1	
R2104		ERDS2TJ332	3.3K	1	
R2105		ERDS2TJ332	3.3K	1	
R2106		ERDS2TJ561	560	1	
R2107		ERDS2TJ152	1.5K	1	
R2108		ERDS2TJ683	68K	1	
R2109		ERG2ANJ470	METAL 2W 47	1	OR ERG2SJ470
R2110		ERDS2TJ563	56K	1	
R2111		ERDS2TJ563	56K	1	
R2112		ERDS2TJ472	4.7K	1	
R2113		ERDS2TJ562	5.6K	1	
R2114		ERDS2TJ152	1.5K	1	
R2115		ERDS2TJ682	6.8K	1	
R2123		ERDS2TJ153	15K	1	
			VARIABLE RESISTORS		
VR2001		EVNK4AA00B54	VARIABLE 50K	1	
VR2002		EVNK6AA00B15	VARIABLE 100K	1	
VR2006		EVNK6AA00B15	VARIABLE 100K	1	
VR2009		EVTK8CA00B15	VARIABLE 100K	1	
VR2010		EVTK8CA00B15	VARIABLE 100K	1	
VR2011		EVNK6AA00B15	VARIABLE 100K	1	
VR2013		EVN38CA00B23	VARIABLE 2K	1	
			CAPACITORS		

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C2001		ECEA1HKN010	ELECTROLYTIC 50V 1	1	
C2002		ECEA1EKN2R2	ELECTROLYTIC 25V 2.2	1	
C2003		ECEA1HK010	ELECTROLYTIC 50V 1	1	
C2005		ECQB1H102KH	MYLAR 50V 1000P	1	
C2006		VCYF1E562MR	SEMICONDUCTOR 25V 5600P	1	
C2007		ECEA1HK0R1	ELECTROLYTIC 50V 0.1	1	
C2008		ECEA0JK101	ELECTROLYTIC 6.3V 100	1	
C2009		ECQV1H683JZ	MYLAR 50V 0.068	1	
C2010		ECQV1H274JZ	MYLAR 50V 0.27	1	
C2011		ECEA0JK470	ELECTROLYTIC 6.3V 47	1	
C2012		ECQB1H182JH	MYLAR 50V 1800P	1	
C2013		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C2014		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C2015		ECEA0JK470	ELECTROLYTIC 6.3V 47	1	
C2016		ECEA10Z47	ELECTROLYTIC 10V 47	1	
C2017		ECQV1H334JZ	MYLAR 50V 0.33	1	
C2018		ECQV1H563JZ	MYLAR 50V 0.056	1	
C2019		ECQB1H182KH	MYLAR 50V 1800P	1	
C2020		VCYF1C104MR1	SEMICONDUCTOR 16V 0.1	1	
C2021		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C2022		ECEA0JK470	ELECTROLYTIC 6.3V 47	1	
C2023		ECKF1H152KB	CERAMIC 50V 1500P	1	
C2024		ECEA1HKN010	ELECTROLYTIC 50V 1	1	
C2025		ECEA1HK010	ELECTROLYTIC 50V 1	1	
C2026		ECQB1H562JH	MYLAR 50V 5600P	1	
C2027		ECEA1HK0R1	ELECTROLYTIC 50V 0.1	1	
C2028		ECQB1H223JH	MYLAR 50V 0.022	1	
C2029		ECEA0JK470	ELECTROLYTIC 6.3V 47	1	
C2030		ECKF1H103ZF	CERAMIC 50V 0.01	1	
C2031		ECQV1H104JZ	MYLAR 50V 0.1	1	
C2032		ECQV1H184JZ	MYLAR 50V 0.18	1	
C2033		ECKF1H102KB	CERAMIC 50V 1000P	1	
C2034		VCYF1C473MR1	SEMICONDUCTOR 16V 0.047	1	
C2035		ECEA1HK010	ELECTROLYTIC 50V 1	1	
C2036		ECEA0JK470	ELECTROLYTIC 6.3V 47	1	
C2037		ECEA1HK010	ELECTROLYTIC 50V 1	1	
C2038		ECEA1HK010	ELECTROLYTIC 50V 1	1	
C2039		ECKF1H103ZF	CERAMIC 50V 0.01	1	
C2040		ECKF1H103ZF	CERAMIC 50V 0.01	1	
C2041		ECQV1H274JZ	MYLAR 50V 0.27	1	
C2043		ECQB1H392KH	MYLAR 50V 3900P	1	
C2044		ECQB1H682JH	MYLAR 50V 6800P	1	
C2045		ECQB1H682JH	MYLAR 50V 6800P	1	
C2046		ECEA1HKR47	ELECTROLYTIC 50V 0.47	1	
C2047		ECQV1H104JZ	MYLAR 50V 0.1	1	
C2048		ECEA1HK010	ELECTROLYTIC 50V 1	1	
C2049		ECEA0JK470	ELECTROLYTIC 6.3V 47	1	
C2050		ECEA1HK0R1	ELECTROLYTIC 50V 0.1	1	
C2051		ECEA1EKN2R2	ELECTROLYTIC 25V 2.2	1	
C2052		ECEA1EKN2R2	ELECTROLYTIC 25V 2.2	1	
C2053		ECEA1EKN2R2	ELECTROLYTIC 25V 2.2	1	
C2054		ECQB1H822KH	MYLAR 50V 8200P	1	
C2055		ECQB1H822KH	MYLAR 50V 8200P	1	
C2056		ECQB1H822KH	MYLAR 50V 8200P	1	
C2057		ECEA1CK470	ELECTROLYTIC 16V 47	1	
C2058		ECEA1CK470	ELECTROLYTIC 16V 47	1	
C2059		ECKF1H472ZF	CERAMIC 50V 4700P	1	
C2060		VCYF1E682MR	SEMICONDUCTOR 25V 6800P	1	
C2061		ECKF1H222KB	CERAMIC 50V 2200P	1	
C2062		ECEA1EK3R3	ELECTROLYTIC 25V 3.3	1	
C2063		VCYF1E123MR	SEMICONDUCTOR 25V 0.012	1	
C2064		ECEA50ZR22	ELECTROLYTIC 50V 0.22	1	
C2065		ECEA1EKN2R2	ELECTROLYTIC 25V 2.2	1	
C2066		ECEA1EKN2R2	ELECTROLYTIC 25V 2.2	1	
C2067		ECEA1EKN2R2	ELECTROLYTIC 25V 2.2	1	
C2068		ECEA1CU101	ELECTROLYTIC 16V 100	1	
C2069		ECEA1HK010	ELECTROLYTIC 50V 1	1	
C2070		ECKF1H222KB	CERAMIC 50V 2200P	1	
C2071		ECKF1H222KB	CERAMIC 50V 2200P	1	
C2072		ECEA1HK010	ELECTROLYTIC 50V 1	1	
C2073		ECEA1HK010	ELECTROLYTIC 50V 1	1	
C2074		ECEA1AN470S	ELECTROLYTIC 10V 47	1	
C2075		ECQV1H104JZ	MYLAR 50V 0.1	1	
C2076		ECEA0JK470	ELECTROLYTIC 6.3V 47	1	
C2077		ECEA1CK470	ELECTROLYTIC 16V 47	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			COMBINATION PARTS		
			(CAPACITOR & RESISTOR)		
CR2001		EXED223M222C	0.022 2.2K	1	
CR2002		EXED472M104C	4700P 100K	1	
			COIL		
L2001		VLQEL05F102K	1000UH	1	
			FILTER		
F2001		VSF0043		1	<!>
			CONNECTORS		
P2001		VJP1237T	10P	1	
P2002		VJP1235T	8P	1	
			(LUMINANCE SECTION)		
			INTEGRATED CIRCUIT		
IC3001		LA7220		1	OR LA7220S
			TRANSISTORS		
Q3001		2SB643		1	(Q,R,S)
Q3002		2SB641		1	(Q,R,S)
					OR 2SA937M (Q,R,S)
Q3004		2SB641		1	(Q,R,S)
					OR 2SA937M (Q,R,S)
			COMBINATION PARTS		
			(TRANSISTOR & RESISTOR)		
QR3001		UN1215		1	
QR3002		UN1215		1	
QR3003		DTC124EA		1	OR UN1212
			DIODES		
D3001		MA165		1	OR 1SS119,1SS133
D3002		MA165		1	OR 1SS119,1SS133
D3003		MA27W		1	
D3004		MA165		1	OR 1SS119,1SS133
D3005		MA165		1	OR 1SS119,1SS133
D3006		MA165		1	OR 1SS119,1SS133
D3007		MA165		1	
D3008		MA165		1	OR 1SS119,1SS133
			RESISTORS		
R3001		ERDS2TJ750	75	1	
R3002		ERDS2TJ750	75	1	
R3003		ERDS2TJ331	330	1	
R3004		ERDS2TJ561	560	1	
R3005		ERDS2TJ471	470	1	
R3006		ERDS2TJ820	82	1	
R3008		ERDS2TJ562	5.6K	1	
R3009		ERDS2TJ222	2.2K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R3010		ERDS2TJ822	8.2K	1	
R3013		ERDS2TJ103	10K	1	
R3014		ERDS2TJ103	10K	1	
R3015		ERDS2TJ561	560	1	
R3016		ERDS2TJ332	3.3K	1	
R3017		ERDS2TJ333	33K	1	
R3018		ERDS2TJ102	1K	1	
R3019		ERDS2TJ562	5.6K	1	
R3020		ERDS2TJ332	3.3K	1	
R3021		ERDS2TJ563	56K	1	
R3022		ERDS2TJ104	100K	1	
			CAPACITORS		
C3001		ECEA1CU470	ELECTROLYTIC 16V 47	1	
C3002		ECEA0GSS331	ELECTROLYTIC 4V 330	1	
C3003		ECEA0JU470	ELECTROLYTIC 6.3V 47	1	
C3004		ECEA0JU470	ELECTROLYTIC 6.3V 47	1	
C3005		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C3006		ECEA1CK470	ELECTROLYTIC 16V 47	1	
			COIL		
L3001		VLQEL05F101K	100UH	1	
			SWITCH		
S3001		ESD32211		1	
			CONNECTORS		
P3001		VJP1235R	8P	1	
P3002		VJP1235R	8P	1	
P3003		VJP1229T	2P	1	
P3004		VJP1231T	4P	1	
			(AUDIO SECTION)		
			INTEGRATED CIRCUITS		
IC4001		TA7325P		1	
IC4002		BA6323L		1	
IC4003		AN6262N		1	OR AN6262
			TRANSISTORS		
Q4001		2SD638		1	(Q,R,S)
Q4002		2SD655		1	(E,F)
Q4003		2SB643		1	(Q,R,S)
			DIODES		
D4001		MA165		1	OR 1SS119,1SS133
D4002		MA165		1	
			RESISTORS		
R4001		ERDS2TJ394	390K	1	
R4002		ERDS2TJ392	3.9K	1	
R4003		ERDS2TJ151	150	1	
R4004		ERDS2TJ394	390K	1	
R4005		ERDS2TJ392	3.9K	1	
R4006		ERDS2TJ392	3.9K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R4007		ERDS2TJ392	3.9K	1	
R4008		ERDS2TJ561	560	1	
R4009		ERDS2TJ100	10	1	
R4010		ERDS2TJ682	6.8K	1	
R4011		ERDS2TJ104	100K	1	
R4012		ERDS2TJ102	1K	1	
R4014		ERDS2TJ272	2.7K	1	
R4015		ERDS2TJ561	560	1	
R4023		ERDS2TJ682	6.8K	1	
			VARIABLE RESISTORS		
VR4001		EVNK6AA00B23	VARIABLE 2K	1	
VR4002		EVNK6AA00B25	VARIABLE 200K	1	
VR4505		EVN38CA00B54	VARIABLE 50K	1	
VR4510		EVN38CA00B15	VARIABLE 100K	1	
			CAPACITORS		
C4001		ECKF1H102KB	CERAMIC 50V 1000P	1	
C4003		ECEA1EK3R3	ELECTROLYTIC 25V 3.3	1	
C4004		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C4005		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C4006		ECEA1CK330	ELECTROLYTIC 16V 33	1	
C4008		ECKF1H102KB	CERAMIC 50V 1000P	1	
C4009		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C4010		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C4011		ECEA1EK3R3	ELECTROLYTIC 25V 3.3	1	
C4013		ECQV1H154JZ	MYLAR 50V 0.15	1	
C4015		ECEA1CK101	ELECTROLYTIC 16V 100	1	
C4016		ECKF1H1032F	CERAMIC 50V 0.01	1	
C4017		ECCF1H101J	CERAMIC 50V 100P	1	OR ECCF1H101K
C4018		ECQB1H123KH	MYLAR 50V 0.012	1	
C4019		ECKF1H1032F	CERAMIC 50V 0.01	1	
C4020		ECEA1HK010	ELECTROLYTIC 50V 1	1	
C4024		ECEA0JK220	ELECTROLYTIC 6.3V 22	1	
C4025		ECCF1H330J	CERAMIC 50V 33P	1	
C4026		ECCF1H330J	CERAMIC 50V 33P	1	
			COIL		
L4001		VLQEL05F101K	100UH	1	
			CONNECTORS		
P4001		VJP1232R	5P	1	
P4003		VJP1233T	6P	1	
P4004		VWJ0027		1	
			(SYSTEM CONTROL SECTION)		
			INTEGRATED CIRCUITS		
IC6001		UPD4503BC		1	OR MN4503B
IC6002		MN15342VGL		1	
IC6003		AN6914		1	OR UPC393C
IC6004		BA6238A		1	
			TRANSISTORS		
Q6001		2SD636		1	(Q,R,S)
Q6002		2SD638		1	(Q,R,S)
Q6003		2SB643		1	(R,S)
Q6004		2SB643		1	(R,S)
Q6005		2SD636		1	(Q,R,S)

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
Q6006		2SB641		1	(Q,R,S)
					OR 2SA937M (Q,R,S)
Q6007		2SB643		1	(Q,R,S)
			COMBINATION PARTS		
			(TRANSISTOR & RESISTOR)		
QR6001		DTC144EA		1	OR UN1213
QR6002		DTC124EA		1	OR UN1212
QR6003		DTA124EA		1	OR UN1112
QR6004		DTC114YA		1	OR UN1214
QR6005		DTC124EA		1	OR UN1212
			DIODES		
D6001		MA165		1	OR 1SS119,1SS133
D6002		MA165		1	OR 1SS119,1SS133
D6004		MA165		1	OR 1SS119,1SS133
D6005		MA165		1	OR 1SS119,1SS133
D6006		MA165		1	OR 1SS119,1SS133
D6007		MA165		1	OR 1SS119,1SS133
D6009		MA165		1	OR 1SS119,1SS133
D6011		MA165		1	OR 1SS119,1SS133
D6012		11DQ04		1	OR ERA81004
			RESISTORS		
R6001		ERDS2TJ391	390	1	
R6002		ERDS2TJ473	47K	1	
R6003		ERDS2TJ333	33K	1	
R6004		ERDS2TJ333	33K	1	
R6005		ERDS2TJ333	33K	1	
R6006		ERDS2TJ683	68K	1	
R6007		ERDS2TJ105	1M	1	
R6008		ERDS2TJ103	10K	1	
R6009		ERDS2TJ474	470K	1	
R6010		EROS2CKG1542	METAL 15.4K	1	
R6011		EROS2CKG1212	METAL 12.1K	1	
R6012		EROS2CKG2261	METAL 2.26K	1	
R6013		ERDS2TJ222	2.2K	1	
R6014		ERDS2TJ103	10K	1	
R6015		ERDS2TJ153	15K	1	
R6016		ERDS2TJ153	15K	1	
R6017		ERDS2TJ333	33K	1	
R6018		ERDS2TJ102	1K	1	
R6019		ERDS2TJ682	6.8K	1	
R6020		ERDS2TJ153	15K	1	
R6021		ERDS2TJ152	1.5K	1	
R6022		ERDS2TJ563	56K	1	
R6023		ERDS2TJ103	10K	1	
R6024		ERDS2TJ103	10K	1	
R6025		ERDS2TJ103	10K	1	
R6026		ERDS2TJ103	10K	1	
R6027		ERDS2TJ103	10K	1	
R6028		ERDS2TJ104	100K	1	
R6029		ERDS2TJ104	100K	1	
R6030		ERDS2TJ104	100K	1	
R6031		ERDS2TJ104	100K	1	
R6032		ERDS2TJ102	1K	1	
R6033		ERDS2TJ473	47K	1	
R6035		ERDS2TJ563	56K	1	
R6036		ERDS2TJ563	56K	1	
R6037		ERDS2TJ563	56K	1	
R6038		ERD2FCG180	FUSE 18	1	<!>
R6039		ERD2FCG120	FUSE 12	1	<!>
R6040		ERDS2TJ222	2.2K	1	
R6041		ERDS2TJ222	2.2K	1	
R6042		ERDS2TJ222	2.2K	1	
R6043		ERDS2TJ681	680	1	
R6044		ERDS2TJ821	820	1	
R6045		ERDS2TJ332	3.3K	1	
R6046		ERDS2TJ103	10K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R6047		ERDS2TJ103	10K	1	
R6048		ERDS2TJ332	3.3K	1	
R6049		ERDS2TJ122	1.2K	1	
R6050		ERDS2TJ332	3.3K	1	
R6051		ERDS2TJ562	5.6K	1	
R6052		ERDS2TJ332	3.3K	1	
R6053		ERDS2TJ103	10K	1	
R6055		ERDS2TJ103	10K	1	
R6057		ERDS2TJ561	560	1	
			CAPACITORS		
C6001		ECEA1HKN010	ELECTROLYTIC 50V 1	1	
C6002		ECQV1H104JZ	MYLAR 50V 0.1	1	
C6003		ECQB1H223KH	MYLAR 50V 0.022	1	
C6004		ECEA1HK010	ELECTROLYTIC 50V 1	1	
C6005		ECEA1HK0R1	ELECTROLYTIC 50V 0.1	1	
C6006		ECKF1H681KB	CERAMIC 50V 680P	1	
C6007		ECKF1H221KB	CERAMIC 50V 220P	1	
C6008		ECEA0JK101	ELECTROLYTIC 6.3V 100	1	
C6009		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C6010		ECKF1H103ZF	CERAMIC 50V 0.01	1	
C6011		ECQV1H184JZ	MYLAR 50V 0.18	1	
C6012		ECWM1H682JZ	MYLAR 50V 6800P	1	
C6013		VCYF1C104MR1	SEMICONDUCTOR 16V 0.1	1	
C6014		ECEA0JK220	ELECTROLYTIC 6.3V 22	1	
C6015		ECCF1H330JC	CERAMIC 50V 33P	1	OR ECCF1H330KC
C6016		ECCF1H330JC	CERAMIC 50V 33P	1	OR ECCF1H330KC
C6017		ECEA1CK470	ELECTROLYTIC 16V 47	1	
C6019		ECKF1H103ZF	CERAMIC 50V 0.01	1	
C6021		ECEA1HK2R2	ELECTROLYTIC 50V 2.2	1	
C6022		ECEA50ZR68	ELECTROLYTIC 50V 0.68	1	OR ECEA50ZR68
			CRYSTAL OSCILLATOR		
X6001		VSX0082		1	OR VSX0128,VSX0142
			CONNECTORS		
P6002		VJP1232R	5P	1	
P6004		VJP1234R	7P	1	
P6005		VJP1234T	7P	1	
			(CHROMINANCE SECTION)		
			TRANSISTORS		
Q8001		2SD636		1	(Q,R,S)
Q8002		2SD636		1	(Q,R,S)
			RESISTORS		
R8001		ERDS2TJ471	470	1	
R8003		ERDS2TJ102	1K	1	
R8004		ERDS2TJ181	180	1	
R8005		ERDS2TJ122	1.2K	1	
R8006		ERDS2TJ121	120	1	
R8007		ERDS2TJ183	18K	1	
R8009		ERDS2TJ821	820	1	
R8010		ERDS2TJ102	1K	1	
R8011		ERDS2TJ102	1K	1	
R8012		ERDS2TJ822	8.2K	1	
R8013		ERDS2TJ332	3.3K	1	
R8014		ERDS2TJ103	10K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			CAPACITORS		
C8001		ECKF1H471KB	CERAMIC 50V 470P	1	
C8002		VCYF1C103MR1	SEMICONDUCTOR 16V 0.01	1	
C8003		ECKF1H121KB	CERAMIC 50V 120P	1	
C8004		ECCF1H220J	CERAMIC 50V 22P	1	OR ECCF1H220K
C8005		ECKF1H103ZF	CERAMIC 50V 0.01	1	
C8006		ECKF1H103ZF	CERAMIC 50V 0.01	1	
C8007		ECKF1H103ZF	CERAMIC 50V 0.01	1	
			COMBINATION PART		
			(CAPACITOR & RESISTOR)		
CR8001		EXED103Z821C	0.01 820	1	
			COILS		
L8001		VLQEL05F150K	15UH	1	
L8002		VLQEL05F180K	18UH	1	
			MISCELLANEOUS		
		VSC1215	HEAT SINK	1	FOR IC2007
		VMC0105	SUPPORT ANGLE	1	
	■	VEP03271B	LUMINANCE & CHROMINANCE		
			PACK C.B.A.		
			P.C.B.ASS'Y		
IC301		VEFY009		1	
IC801		VEFC008		1	
			TRANSISTOR		
Q801		2SD636		1	(Q,R,S)
			COMBINATION PARTS		
			(TRANSISTOR & RESISTOR)		
QR301		DTC144EA		1	OR UN1213
QR302		DTC144EA		1	OR UN1213
QR303		DTC124EA		1	OR UN1212
			DIODE		
D301		MA165		1	OR 1SS133T,1SS119
			RESISTORS		
R301		ERDS2TJ122	1.2K	1	
R302		ERDS2TJ121	120	1	
R303		ERDS2TJ103	10K	1	
R304		ERDS2TJ393	39K	1	
R305		ERDS2TJ821	820	1	
R306		ERDS2TJ824	820K	1	
R307		ERDS2TJ824	820K	1	
R308		ERDS2TJ393	39K	1	
R309		ERDS2TJ152	1.5K	1	
R310		ERDS2TJ183	18K	1	
R313		ERDS2TJ222	2.2K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R801		ERDS2TJ271	270	1	
R802		ERDS2TJ681	680	1	
R803		ERDS2TJ273	27K	1	
R804		ERDS2TJ821	820	1	
R805		ERDS2TJ102	1K	1	
R806		ERDS2TJ122	1.2K	1	
R807		ERDS2TJ222	2.2K	1	
R808		ERDS2TJ332	3.3K	1	
R809		ERDS2TJ470	47	1	
			CAPACITORS		
C301		ECEA0JK101	ELECTROLYTIC 6.3V 100	1	
C302		ECKF1H391KB	CERAMIC 50V 390P	1	
C303		ECEA0JK101	ELECTROLYTIC 6.3V 100	1	
C304		ECCF1H470JC	CERAMIC 50V 47P	1	
C305		ECEA1EK3R3	ELECTROLYTIC 25V 3.3	1	
C306		ECEA1EK3R3	ELECTROLYTIC 25V 3.3	1	
C307		ECEA1EK4R7	ELECTROLYTIC 25V 4.7	1	
C308		ECEA1EK3R3	ELECTROLYTIC 25V 3.3	1	
C309		ECEA1HK2R2	ELECTROLYTIC 50V 2.2	1	
C310		VCYF1C473MR1	SEMICONDUCTOR 16V 0.047	1	
C311		ECEA0JK220	ELECTROLYTIC 6.3V 22	1	
C312		ECCF1H330J	CERAMIC 50V 33P	1	OR ECCF1H330K
C313		ECKF1H151KB	CERAMIC 50V 150P	1	
C314		ECQV1H224JZ	MYLAR 50V 0.22	1	
C315		ECKF1H151KB	CERAMIC 15V 150P	1	
C801		ECKF1H222KB	CERAMIC 50V 2200P	1	
C802		ECEA1EK3R3	ELECTROLYTIC 25V 3.3	1	
C803		ECEA1HK010	ELECTROLYTIC 50V 1	1	
C804		ECCF1H180JC	CERAMIC 50V 18P	1	
C806		ECEA0JK470	ELECTROLYTIC 6.3V 47	1	
C807		ECKF1H271KB	CERAMIC 50V 270P	1	
C808		ECEA0JK470	ELECTROLYTIC 6.3V 47	1	
C809		ECKF1H102KB	CERAMIC 50V 1000P	1	
C810		ECCF1H080DC	CERAMIC 50V 8P	1	
C811		ECKF1H103ZF	CERAMIC 50V 0.01	1	
C812		ECEA1OZ100	ELECTROLYTIC 10V 10	1	
C813		VCYF1C333MR1	SEMICONDUCTOR 16V 0.033	1	
			COILS		
L301		VLQEL05F100K	10UH	1	
L302		VLQEL05F100K	10UH	1	
L303		VLQEL05F101K	100UH	1	
L304		VLQEL05F121K	120UH	1	
L305		VLQEL05F151K	150UH	1	
L306		VLQEL05F121K	120UH	1	
L307		VLQEL05F101K	100UH	1	
L308		VLQEL05F151K	150UH	1	
L801		VLQEL06F470J	47UH	1	
L802		VLQEL05F331K	330UH	1	
L803		VLQEL05F221K	220UH	1	
L804		VLQEL05F101K	100UH	1	
L805		VLQEL05F101K	100UH	1	
L806		VLQEL05F180K	18UH	1	
			COMBINATION PART		
			(CAPACITOR & RESISTOR)		
CR801		EXED271K122C	270P 1.2K	1	
			DELAY LINES		
DL301		VLD0077		1	
DL801		VLD0072		1	OR VLD0075
			FILTERS		
FL301		VLF0201		1	OR VLF0218

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
FL801		VLF0330		1	OR VLF0344
FL802		VLF0295		1	
			CRYSTAL OSCILLATOR		
X801		VSX0125		1	
			CONNECTORS		
PK301		VJR0130W	12P	1	
PK302		VJR0130W	12P	1	
PK303		VJR0129W		1	
	■	VEP04125	AUDIO PACK C.B.A.		
			INTEGRATED CIRCUITS		
IC401		UPC1514CA		1	
IC402		UPC1519HA		1	
			TRANSISTORS		
Q401		2SD601		1	(R,T,W)
Q402		2SD601		1	(Q,R,S,T,W)
Q403		2SD601		1	(Q,R,S,T,W)
Q404		2SD601		1	(Q,R,S,T,W)
Q405		2SD601		1	(Q,R,S,T,W)
Q406		2SD601		1	(Q,R,S,T,W)
			RESISTORS		
R401		ERJ6GCYJ133	CHIP 1/16W 13K	1	
R402		ERJ6GCYJ392	CHIP 1/16W 3.9K	1	
R403		ERJ6GCYJ391	CHIP 1/16W 390	1	
R404		ERJ6GCYJ121	CHIP 1/16W 120	1	
R405		ERJ6GCYJ105	CHIP 1/16W 1M	1	
R406		ERJ6GCYJ333	CHIP 1/16W 33K	1	
R407		ERJ6GCYJ273	CHIP 1/16W 27K	1	
R408		ERJ6GCYJ334	CHIP 1/16W 330K	1	
R409		ERJ6GCYJ271	CHIP 1/16W 270	1	
R410		ERJ6GCYJ392	CHIP 1/16W 3.9K	1	
R411		ERJ6GCYJ151	CHIP 1/16W 150	1	
R413		ERJ6GCYJ222	CHIP 1/16W 2.2K	1	
R414		ERJ6GCYJ121	CHIP 1/16W 120	1	
R415		ERJ6GCYJ563	CHIP 1/16W 56K	1	
R416		ERJ6GCYJ472	CHIP 1/16W 4.7K	1	
R417		ERJ6GCYJ472	CHIP 1/16W 4.7K	1	
R418		ERJ6GCYJ472	CHIP 1/16W 4.7K	1	
R419		ERJ6GCYJ103	CHIP 1/16W 10K	1	
R420		ERJ6GCYJ471	CHIP 1/16W 470	1	
R421		ERJ6GCYJ472	CHIP 1/16W 4.7K	1	
R422		ERJ6GCYJ822	CHIP 1/16W 8.2K	1	
R423		ERJ6GCYJ472	CHIP 1/16W 4.7K	1	
R424		ERJ6GCYJ181	CHIP 1/16W 180	1	
R425		ERJ6GCYJ221	CHIP 1/16W 220	1	
			CAPACITORS		
C401		ECEA1HK010	ELECTROLYTIC 50V 1	1	
C402		ECUX1H102KBN	CERMIC 50V 1000P	1	
C403		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C404		ECQP1222JZ	MYLAR 100V 2200P	1	
C405		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C406		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C407		ECUX1H102KBN	CERMIC 50V 1000P	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C408		ECEA1HKM010	ELECTROLYTIC 50V 1	1	
C409		ECEA1CK470	ELECTROLYTIC 16V 47	1	
C410		ECQV1H473JZ	MYLAR 50V 0.047	1	
C411		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C412		ECEA1AK470	ELECTROLYTIC 10V 47	1	
C413		ECEA1HKR33	ELECTROLYTIC 50V 0.33	1	
C414		ECEA1HK010	ELECTROLYTIC 50V 1	1	
C415		ECEA1HK0R1	ELECTROLYTIC 50V 0.1	1	
C416		ECQV1H473JZ	MYLAR 50V 0.047	1	
C417		ECQB1H333JH	MYLAR 50V 0.033	1	
C418		ECEA1CKM100	ELECTROLYTIC 16V 10	1	
C419		ECEA1AK470	ELECTROLYTIC 10V 47	1	
C421		ECQV1H124JZ	MYLAR 50V 0.12	1	
C422		ECQV1H104JZ	MYLAR 50V 0.1	1	
C423		ECQB1H273JH	MYLAR 50V 0.027	1	
C424		ECEA1HK010	ELECTROLYTIC 50V 1	1	
C425		ECQV1H394JZ	MYLAR 50V 0.39	1	
			COMBINATION PARTS		
			(CAPACITOR & RESISTOR)		
CR401		EXED153M223C	0.015 22K	1	
CR402		EXED821K473C	820P 47K	1	
CR403		EXED102K153C	1000P 15K	1	
			COILS		
L401		VLQEL05F471K	470UH	1	
L402		VLQEL07F682J	6800UH	1	
L404		VLQEL07F222J	2200UH	1	
			FILTER		
FL401		VLF0332		1	
			TRANSFORMER		
T401		EIQ7QF001B		1	
			CONNECTORS		
PK401		VJR0131W	13P	1	
PK402		VJR0128W	5P	1	
	■	VEP00E45A	AUDIO MUTE PACK C.B.A.		
			TRANSISTORS		
Q2013		2SD636		1	(Q,R,S)
Q2014		2SD636		1	(Q,R,S)
			COMBINATION PARTS		
			(TRANSISTOR & RESISTOR)		
QR2015		DTC124EA		1	OR UN1212
QC2016		DTA114EA		1	OR UN1111
			DIODE		
D2039		MA165		1	OR 1SS119,1SS133
			RESISTORS		
R2116		ERDS2TJ393	39K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R2117		ERDS2TJ153	15K	1	
R2118		ERDS2TJ562	5.6K	1	
R2119		ERDS2TJ104	100K	1	
R2120		ERDS2TJ223	22K	1	
R2121		ERDS2TJ223	22K	1	
R2122		ERDS2TJ153	15K	1	
			CAPACITORS		
C2078		ECEA50Z2R2	ELECTROLYTIC 50V 2.2	1	
C2079		ECEA1HK2R2	ELECTROLYTIC 50V 2.2	1	
C2080		ECQV1H393JZ	MYLAR 50V 0.039	1	
C4012		ECEA0JK220	ELECTROLYTIC 6.3V 22	1	
C4014		ECEA0JK470	ELECTROLYTIC 6.3V 47	1	
	■	VEP02215A	INTER FACE (POWER SUPPLY		
			(2) & SUB SERBO) C.B.A.		
			(POWER SUPPLY (2) SECTION)		
			DIODES		
D1201		10E1		1	<!>
D1202		10E1		1	<!>
D1203		10E1		1	<!>
D1204		10E1		1	<!>
D1205		10E1		1	<!>
D1206		10E1		1	<!>
D1207		10E1		1	<!>
D1208		10E1		1	<!>
D1209		10E1		1	<!>
D1210		10E1		1	<!>
D1211		10E1		1	<!>
D1212		10E1		1	<!>
D1213		10E2		1	<!>
D1214		10E2		1	<!>
D1216		MA4130		1	OR MA4140
D1217		MA4062		1	OR MA4068
			RESISTORS		
R1201		ERDS2TJ183	18K	1	
R1202		ERDS2TJ472	4.7K	1	
			CAPACITORS		
C1201		ECKF1H103ZF	CERAMIC 50V 0.01	1	
C1202		ECKF1H103ZF	CERAMIC 50V 0.01	1	
C1203		ECKF1H103ZF	CERAMIC 50V 0.01	1	
C1204		ECEB1CU222FY	ELECTROLYTIC 16V 2200	1	
C1205		ECEB1EU102FY	ELECTROLYTIC 25V 1000	1	
C1206		ECEB1EU102FY	ELECTROLYTIC 25V 1000	1	
C1207		ECEB1EU102FY	ELECTROLYTIC 25V 1000	1	
C1208		ECEB1EU102FY	ELECTROLYTIC 25V 1000	1	
C1209		ECEA1JU101	ELECTROLYTIC 63V 100	1	
C1210		ECEA1JU101	ELECTROLYTIC 63V 100	1	
			CONNECTORS		
P1201		VJP1145	8P	1	
P1202		VJP1230T	3P	1	
P1203		VJP1231T	4P	1	
P1204		VJP1235T	8P	1	
P1205		VJP1147	12P	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			(SUB SERVO SECTION)		
			TRANSISTORS		
Q2201		2SD636		1	(Q,R,S)
Q2203		2SD1205		1	(Q,R)
			COMBINATION PARTS		
			(TRANSISTOR & RESISTOR)		
QR2201		UN1217		1	
QR2202		UN1217		1	
QR2203		DTA144WA		1	
QR2204		DTA144WA		1	
QR2205		UN1117		1	
QR2206		DTC124EA		1	OR UN1212
QR2207		DTC124EA		1	OR UN1212
QR2208		DTC124EA		1	OR UN1212
QR2209		DTC144EA		1	OR UN1213
QR2210		DTA144EA		1	OR UN1213
QR2211		DTC144EA		1	OR UN1213
QR2212		DTC144EA		1	OR UN1213
QR2213		DTA144EA		1	OR UN1113
			DIODES		
D2201		MA165		1	
D2202		MA165		1	
D2203		MA165		1	
D2204		MA165		1	
D2205		MA165		1	
D2206		MA165		1	
D2207		MA165		1	
D2208		MA27WB		1	
D2209		MA165		1	
D2210		MA165		1	
D2211		MA165		1	
D2212		MA4033		1	
D2215		MA165		1	
D2216		MA165		1	
D2217		MA165		1	
D2218		MA165		1	
D2219		MA165		1	
D2220		MA165		1	
			RESISTORS		
R2201		ERDS2TJ471	470	1	
R2202		ERDS2TJ103	10K	1	
R2203		ERDS2TJ103	10K	1	
R2204		ERDS2TJ334	330K	1	
R2205		ERDS2TJ223	22K	1	
R2206		ERDS2TJ562	5.6K	1	
R2207		ERDS2TJ223	22K	1	
R2208		ERDS2TJ562	5.6K	1	
R2209		ERDS2TJ562	5.6K	1	
R2210		ERDS2TJ153	15K	1	
R2211		ERDS2TJ222	2.2K	1	
R2212		ERDS2TJ682	6.8K	1	
R2217		ERDS2TJ471	470	1	
R2218		ERDS2TJ103	10K	1	
R2219		ERDS2TJ103	10K	1	
R2220		ERDS2TJ124	120K	1	
R2222		ERDS2TJ154	150K	1	
R2223		ERDS2TJ223	22K	1	
R2224		ERDS2TJ223	22K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R2225		ERDS2TJ823	82K	1	
R2228		ERDS2TJ272	2.7K	1	
R2229		ERDS2TJ103	10K	1	
R2230		ERDS2TJ103	10K	1	
R2231		ERDS2TJ103	10K	1	
R2232		ERDS2TJ104	100K	1	
			VARIABLE RESISTORS		
VR2201		EVN3ACA00B25	VARIABLE 200K	1	
VR2202		EVN3ACA00B15	VARIABLE 100K	1	
			CAPACITORS		
C2201		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C2202		ECEA1HK0R1	ELECTROLYTIC 50V 0.1	1	
C2203		ECQP1H274JZ	MYLAR 50V 0.27	1	
C2204		ECEA0JK220	ELECTROLYTIC 6.3V 22	1	
C2205		ECEA1HK0R1	ELECTROLYTIC 50V 0.1	1	
C2206		ECEA1HK0R1	ELECTROLYTIC 50V 0.1	1	
			CONNECTORS		
P2201		VJP1229T	2P	1	
P2202		VJP1232T	5P	1	
P2203		VJP1235T	8P	1	
P2204		VJP1231T	4P	1	
			MISCELLANEOUS		
		VJF0102	WIRE SADDLE	1	
	■	VEP04124A	FM AUDIO C.B.A.		
			P.C.B.ASS'Y		
IC4506		VEFA006		1	
IC4508		VEFA006		1	
			INTEGRATED CIRCUITS		
IC4501		BA7055LS		1	
IC4502		TA7325P		1	
IC4503		UPD4066BC		1	OR MN4066B
IC4504		TC9145P		1	
IC4505		NJM4558D		1	OR AN6552
IC4507		TA7347P		1	
IC4509		TA7347P		1	
IC4510		UPC1531HA		1	
IC4512		AN6914		1	OR UPC393C
			TRANSISTORS		
Q4501		2SD1330		1	(S,T)
Q4502		2SD1330		1	(S,T)
Q4503		2SD655		1	(E,F)
Q4504		2SD655		1	(E,F)
Q4505		2SD636		1	(Q,R,S)
Q4506		2SD1330		1	(S,T)
Q4507		2SD655		1	(E,F)
Q4508		2SC2188		1	
Q4509		2SD655		1	(E,F)
Q4510		2SB641		1	(Q,R,S)
Q4511		2SC2188		1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
Q4512		2SD636		1	(Q,R,S)
Q4513		2SB641		1	(Q,R,S)
Q4514		2SD636		1	(Q,R,S)
Q4515		2SD638		1	(Q,R,S)
Q4516		2SD638		1	(Q,R,S)
Q4517		2SD638		1	(Q,R,S)
Q4518		2SD636		1	(Q,R,S)
Q4520		2SB641		1	(Q,R,S)
Q4521		2SC2188		1	
Q4522		2SD636		1	(Q,R,S)
Q4523		2SD636		1	(Q,R,S)
Q4524		2SD636		1	(Q,R,S)
Q4525		2SD636		1	(Q,R,S)
Q4526		2SD636		1	(Q,R,S)
Q4527		2SD636		1	(Q,R,S)
			COMBINATION PARTS		
			(TRANSISTOR & RESISTOR)		
QR4501		DTC124EA		1	OR UN1212
QR4502		DTC124EA		1	OR UN1212
QR4503		DTC124EA		1	OR UN1212
QR4506		DTA124EA		1	OR UN1112
QR4507		DTC124EA		1	OR UN1212
QR4508		UN1217		1	
QR4509		DTC124EA		1	OR UN1212
QR4510		DTC124EA		1	OR UN1212
			DIODES		
D4501		MA4062ML		1	
D4504		MA154WK		1	
D4505		MA165		1	OR 1SS119,1SS133
D4506		MA154WK		1	
D4507		MA154WK		1	
D4508		MA165		1	OR 1SS119,1SS133
D4509		MA165		1	OR 1SS119,1SS133
D4510		MA165		1	OR 1SS119,1SS133
D4511		MA165		1	OR 1SS119,1SS133
D4512		MA165		1	OR 1SS119,1SS133
			RESISTORS		
R4501		ERDS2TJ101	100	1	
R4502		ERDS2TJ101	100	1	
R4503		ERDS2TJ101	100	1	
R4504		ERDS2TJ473	47K	1	
R4505		ERDS2TJ101	100	1	
R4506		ERDS2TJ473	47K	1	
R4507		ERDS2TJ561	560	1	
R4508		ERDS2TJ561	560	1	
R4509		ERDS2TJ682	6.8K	1	
R4510		ERDS2TJ682	6.8K	1	
R4511		ERDS2TJ822	8.2K	1	
R4512		ERDS2TJ333	33K	1	
R4513		ERDS2TJ394	390K	1	
R4514		ERDS2TJ223	22K	1	
R4515		ERDS2TJ182	1.8K	1	
R4516		ERDS2TJ394	390K	1	
R4517		ERDS2TJ223	22K	1	
R4518		ERDS2TJ182	1.8K	1	
R4519		ERDS2TJ102	1K	1	
R4520		ERDS2TJ102	1K	1	
R4521		ERDS2TJ102	1K	1	
R4523		ERDS2TJ102	1K	1	
R4524		ERDS2TJ393	39K	1	
R4525		ERDS2TJ102	1K	1	
R4526		ERDS2TJ473	47K	1	
R4527		ERDS2TJ473	47K	1	
R4528		ERDS2TJ682	6.8K	1	
R4529		ERDS2TJ333	33K	1	
R4531		ERDS2TJ104	100K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R4532		ERDS2TJ104	100K	1	
R4533		ERDS2TJ104	100K	1	
R4534		ERDS2TJ104	100K	1	
R4535		ERDS2TJ393	39K	1	
R4536		ERDS2TJ393	39K	1	
R4537		ERDS2TJ102	1K	1	
R4538		ERDS2TJ102	1K	1	
R4539		ERDS2TJ183	18K	1	
R4540		ERDS2TJ103	10K	1	
R4541		ERDS2TJ183	18K	1	
R4542		ERDS2TJ333	33K	1	
R4543		ERDS2TJ333	33K	1	
R4544		ERDS2TJ103	10K	1	
R4545		ERDS2TJ104	100K	1	
R4546		ERDS2TJ104	100K	1	
R4547		ERDS2TJ473	47K	1	
R4548		ERDS2TJ473	47K	1	
R4549		ERDS2TJ562	5.6K	1	
R4550		ERDS2TJ562	5.6K	1	
R4551		ERDS2TJ333	33K	1	
R4552		ERDS2TJ393	39K	1	
R4553		ERDS2TJ272	2.7K	1	
R4554		ERDS2TJ563	56K	1	
R4555		ERDS2TJ333	33K	1	
R4556		ERDS2TJ821	820	1	
R4557		ERDS2TJ181	180	1	
R4558		EROS2CKG4701	METAL 4.7K	1	
R4559		EROS2CKG4700	METAL 470	1	
R4560		ERDS2TJ473	47K	1	
R4561		EROS2CKG1301	METAL 1.3K	1	
R4562		EROS2CKG1802	METAL 18K	1	
R4563		EROS2CKG6801	METAL 6.8K	1	
R4564		ERDS2TJ682	6.8K	1	
R4565		ERDS2TJ102	1K	1	
R4566		ERDS2TJ471	470	1	
R4567		ERDS2TJ473	47K	1	
R4568		ERDS2TJ103	10K	1	
R4569		ERDS2TJ562	5.6K	1	
R4570		ERDS2TJ102	1K	1	
R4571		ERDS2TJ104	100K	1	
R4572		ERDS2TJ273	27K	1	
R4573		ERDS2TJ821	820	1	
R4574		ERDS2TJ333	33K	1	
R4575		ERDS2TJ563	56K	1	
R4577		ERDS2TJ561	560	1	
R4578		ERDS2TJ561	560	1	
R4579		EROS2CKG4701	METAL 4.7K	1	
R4580		EROS2CKG4700	METAL 470	1	
R4581		ERDS2TJ473	47K	1	
R4582		EROS2CKG1301	METAL 1.3K	1	
R4583		EROS2CKG1802	METAL 18K	1	
R4584		EROS2CKG6801	METAL 6.8K	1	
R4585		ERDS2TJ682	6.8K	1	
R4586		ERDS2TJ102	1K	1	
R4587		ERDS2TJ471	470	1	
R4588		ERDS2TJ562	5.6K	1	
R4589		ERDS2TJ103	10K	1	
R4590		ERDS2TJ683	68K	1	
R4591		ERDS2TJ104	100K	1	
R4592		ERDS2TJ153	15K	1	
R4593		ERDS2TJ221	220	1	
R4594		ERDS2TJ474	470K	1	
R4595		ERDS2TJ392	3.9K	1	
R4596		ERDS2TJ222	2.2K	1	
R4597		ERDS2TJ471	470	1	
R4598		ERDS2TJ102	1K	1	
R4599		ERDS2TJ392	3.9K	1	
R4600		ERDS2TJ392	3.9K	1	
R4601		ERDS2TJ102	1K	1	
R4602		ERDS2TJ100	10	1	
R4603		ERDS2TJ100	10	1	
R4604		ERDS2TJ332	3.3K	1	
R4605		ERDS2TJ332	3.3K	1	
R4606		ERDS2TJ223	22K	1	
R4607		ERDS2TJ100	10	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R4608		ERDS2TJ100	10	1	
R4609		ERDS2TJ333	33K	1	
R4610		ERDS2TJ682	6.8K	1	
R4611		ERDS2TJ820	82	1	
R4612		ERDS2TJ562	5.6K	1	
R4613		ERDS2TJ562	5.6K	1	
R4614		ERDS2TJ152	1.5K	1	
R4615		ERDS2TJ153	15K	1	
R4616		ERDS2TJ101	100	1	
R4617		ERDS2TJ393	39K	1	
R4618		ERDS2TJ153	15K	1	
R4619		ERDS2TJ101	100	1	
R4620		EROS2CKG1801	METAL 1.8K	1	
R4621		ERDS2TJ471	470	1	
R4622		ERDS2TJ471	470	1	
R4623		ERDS2TJ472	4.7K	1	
R4624		ERDS2TJ222	2.2K	1	
R4625		ERDS2TJ472	4.7K	1	
R4626		ERDS2TJ103	10K	1	
R4627		ERDS2TJ471	470	1	
R4628		ERDS2TJ104	100K	1	
R4629		ERDS2TJ681	680	1	
R4630		ERDS2TJ681	680	1	
R4631		ERDS2TJ222	2.2K	1	
R4632		ERDS2TJ152	1.5K	1	
R4633		ERDS2TJ472	4.7K	1	
R4634		ERDS2TJ224	220K	1	
R4635		ERDS2TJ392	3.9K	1	
R4636		ERDS2TJ222	2.2K	1	
R4637		ERDS2TJ222	2.2K	1	
R4638		ERDS2TJ392	3.9K	1	
R4639		ERDS2TJ223	22K	1	
R4640		ERDS2TJ124	120K	1	
R4641		ERDS2TJ472	4.7K	1	
R4642		ERDS2TJ562	5.6K	1	
R4643		ERDS2TJ152	1.5K	1	
R4644		ERDS2TJ561	560	1	
R4645		ERDS2TJ103	10K	1	
R4646		ERDS2TJ104	100K	1	
R4647		ERDS2TJ105	1M	1	
R4648		ERDS2TJ223	22K	1	
R4649		ERDS2TJ103	10K	1	
R4650		EROS2CKG1001	METAL 1K	1	
R4651		ERDS2TJ153	15K	1	
R4652		ERDS2TJ394	390K	1	
R4653		ERDS2TJ122	1.2K	1	
R4654		ERDS2TJ153	15K	1	
R4655		EROS2CKG1801	METAL 1.8K	1	
R4656		EROS2CKG1001	METAL 1K	1	
R4657		ERDS2TJ332	3.3K	1	
R4658		ERDS2TJ102	1K	1	
R4659		ERDS2TJ103	10K	1	
R4660		ERDS2TJ393	39K	1	
R4661		ERDS2TJ152	1.5K	1	
R4662		ERDS2TJ223	22K	1	
R4663		ERDS2TJ223	22K	1	
R4664		ERDS2TJ332	3.3K	1	
R4665		ERDS2TJ332	3.3K	1	
R4666		ERDS2TJ103	10K	1	
R4667		ERDS2TJ222	2.2K	1	
R4668		ERDS2TJ330	33	1	
R4669		ERDS2TJ103	10K	1	
R4670		ERDS2TJ472	4.7K	1	
R4671		ERDS2TJ330	33	1	
R4672		ERDS2TJ330	33	1	
R4673		ERDS2TJ102	1K	1	
R4674		ERDS2TJ102	1K	1	
R4675		ERDS2TJ822	8.2K	1	
			VARIABLE RESISTORS		
VR4503		EVNK6AA00B53	VARIABLE 5K	1	
VR4504		EVN38CA00B23	VARIABLE 2K	1	
VR4508		EVN38CA00B23	VARIABLE 2K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			CAPACITORS		
C4501		ECEA1AK470	ELECTROLYTIC 10V 47	1	
C4502		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C4503		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C4504		ECEA1AK470	ELECTROLYTIC 10V 47	1	
C4505		ECEA1EK3R3	ELECTROLYTIC 25V 3.3	1	
C4506		ECEA1EK3R3	ELECTROLYTIC 25V 3.3	1	
C4507		ECEA1EK3R3	ELECTROLYTIC 25V 3.3	1	
C4508		ECEA1EK4R7	ELECTROLYTIC 25V 4.7	1	
C4509		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C4510		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C4511		ECEA1EK4R7	ELECTROLYTIC 25V 4.7	1	
C4512		ECEA1AK330	ELECTROLYTIC 10V 33	1	
C4513		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C4514		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C4516		ECEA1EK3R3	ELECTROLYTIC 25V 3.3	1	
C4517		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C4519		ECEA1EK3R3	ELECTROLYTIC 25V 3.3	1	
C4520		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C4521		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C4522		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C4523		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C4524		ECEA1EK3R3	ELECTROLYTIC 25V 3.3	1	
C4525		ECEA1EK3R3	ELECTROLYTIC 25V 3.3	1	
C4526		ECEA1EK3R3	ELECTROLYTIC 25V 3.3	1	
C4527		ECEA1EK3R3	ELECTROLYTIC 25V 3.3	1	
C4528		ECEA1EK3R3	ELECTROLYTIC 25V 3.3	1	
C4529		ECEA1EK3R3	ELECTROLYTIC 25V 3.3	1	
C4530		ECEA1EK3R3	ELECTROLYTIC 25V 3.3	1	
C4531		ECEA1EK3R3	ELECTROLYTIC 25V 3.3	1	
C4532		ECEA1AK330	ELECTROLYTIC 10V 33	1	
C4533		ECEA1CK330	ELECTROLYTIC 16V 33	1	
C4534		ECEA1AK470	ELECTROLYTIC 10V 47	1	
C4535		ECEA1AK470	ELECTROLYTIC 10V 47	1	
C4536		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C4537		ECEA0JK470	ELECTROLYTIC 6.3V 47	1	
C4538		ECEA0JK470	ELECTROLYTIC 6.3V 47	1	
C4539		ECQB1H103JH	MYLAR 50V 0.01	1	
C4540		ECEA25Z3R3	ELECTROLYTIC 25V 3.3	1	
C4541		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C4542		ECEA0JK101	ELECTROLYTIC 6.3V 100	1	
C4543		ECEA0JK101	ELECTROLYTIC 6.3V 100	1	
C4544		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C4545		ECEA1EK3R3	ELECTROLYTIC 25V 3.3	1	
C4546		ECEA1EK3R3	ELECTROLYTIC 25V 3.3	1	
C4547		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C4548		ECWM1H102KZ	MYLAR 50V 1000P	1	OR ECQB1H102KH
C4549		ECCF1H220JC	CERAMIC 50V 22P	1	
C4550		ECCF1H680JC	CERAMIC 50V 68P	1	
C4551		ECEA25Z3R3	ELECTROLYTIC 25V 3.3	1	
C4552		ECQB1H473JH	MYLAR 50V 0.047	1	
C4553		ECEA10Z22	ELECTROLYTIC 10V 200	1	OR ECEA10M22
C4554		ECEA0JK470	ELECTROLYTIC 6.3V 47	1	
C4555		ECEA0JK470	ELECTROLYTIC 6.3V 47	1	
C4556		ECQB1H393JH	MYLAR 50V 0.039	1	
C4557		ECEA0JK220	ELECTROLYTIC 6.3V 22	1	
C4558		ECEA0JK220	ELECTROLYTIC 6.3V 22	1	
C4559		ECEA0JK101	ELECTROLYTIC 6.3V 100	1	
C4560		ECQB1H153JH	MYLAR 50V 0.015	1	
C4561		ECEA0JK220	ELECTROLYTIC 6.3V 22	1	
C4562		ECKF1H561KB	CERAMIC 50V 560P	1	
C4563		ECEA0JK101	ELECTROLYTIC 6.3V 100	1	
C4564		ECEA0JK101	ELECTROLYTIC 6.3V 100	1	
C4565		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C4566		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C4567		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C4568		ECKF1H103ZF	CERAMIC 50V 0.01	1	
C4569		ECKF1H103ZF	CERAMIC 50V 0.01	1	
C4570		ECKF1H103ZF	CERAMIC 50V 0.01	1	
C4571		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C4572		ECEA0JK470	ELECTROLYTIC 6.3V 47	1	
C4573		ECEA0JK470	ELECTROLYTIC 6.3V 47	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C4574		ECQB1H103JH	MYLAR 50V 0.01	1	
C4575		ECEA25Z3R3	ELECTROLYTIC 25V 3.3	1	
C4576		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C4577		ECEA0JK101	ELECTROLYTIC 6.3V 100	1	
C4578		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C4579		ECEA1EK3R3	ELECTROLYTIC 25V 3.3	1	
C4580		ECEA0JK101	ELECTROLYTIC 6.3V 100	1	
C4581		ECEA1EK3R3	ELECTROLYTIC 25V 3.3	1	
C4582		ECQB1H102JH	MYLAR 50V 1000P	1	OR ECWM1H102KZ
C4583		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C4584		ECCF1H470JC	CERAMIC 50V 47P	1	
C4585		ECEA25Z3R3	ELECTROLYTIC 25V 3.3	1	
C4586		ECQB1H473JH	MYLAR 50V 0.047	1	
C4587		ECEA10Z22	ELECTROLYTIC 10V 200	1	OR ECEA10M22
C4588		ECEA0JK470	ELECTROLYTIC 6.3V 47	1	
C4589		ECEA0JK470	ELECTROLYTIC 6.3V 47	1	
C4590		ECQB1H393JH	MYLAR 50V 0.039	1	
C4591		ECEA0JK220	ELECTROLYTIC 6.3V 22	1	
C4592		ECEA0JK220	ELECTROLYTIC 6.3V 22	1	
C4593		ECEA0JK101	ELECTROLYTIC 6.3V 100	1	
C4594		ECQB1H153JH	MYLAR 50V 0.015	1	
C4595		ECEA0JK220	ELECTROLYTIC 6.3V 22	1	
C4596		ECKF1H561KB	CERAMIC 50V 560P	1	
C4597		ECEA0JK101	ELECTROLYTIC 6.3V 100	1	
C4598		ECEA0JK101	ELECTROLYTIC 6.3V 100	1	
C4599		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C4600		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C4601		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C4604		ECKF1H103ZF	CERAMIC 50V 0.01	1	
C4605		ECKF1H103ZF	CERAMIC 50V 0.01	1	
C4606		ECKF1H103ZF	CERAMIC 50V 0.01	1	
C4607		ECKF1H103ZF	CERAMIC 50V 0.01	1	
C4608		ECEA1CK330	ELECTROLYTIC 16V 33	1	
C4609		ECKF1H103ZF	CERAMIC 50V 0.01	1	
C4610		ECKF1H103ZF	CERAMIC 50V 0.01	1	
C4611		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C4612		ECKF1H103ZF	CERAMIC 50V 0.01	1	
C4613		ECKF1H103ZF	CERAMIC 50V 0.01	1	
C4614		ECKF1H103ZF	CERAMIC 50V 0.01	1	
C4615		ECEA1HK010	ELECTROLYTIC 50V 1	1	
C4616		ECKF1H103ZF	CERAMIC 50V 0.01	1	
C4617		ECKF1H103ZF	CERAMIC 50V 0.01	1	
C4618		ECEA1HK010	ELECTROLYTIC 50V 1	1	
C4619		ECEA0JK330	ELECTROLYTIC 6.3V 33	1	
C4620		ECKF1H103ZF	CERAMIC 50V 0.01	1	
C4621		ECEA0JK330	ELECTROLYTIC 6.3V 33	1	
C4622		ECKF1H103ZF	CERAMIC 50V 0.01	1	
C4623		ECKF1H103ZF	CERAMIC 50V 0.01	1	
C4624		ECKF1H103ZF	CERAMIC 50V 0.01	1	
C4625		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C4626		ECKF1H103ZF	CERAMIC 50V 0.01	1	
C4627		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C4628		ECCF1H270JC	CERAMIC 50V 27P	1	
C4629		ECCF1H270JC	CERAMIC 50V 27P	1	
C4630		ECEA0JK330	ELECTROLYTIC 6.3V 33	1	
C4631		ECKF1H103ZF	CERAMIC 50V 0.01	1	
C4632		ECQB1H103KH	MYLAR 50V 0.01	1	
C4633		ECCF1H220JC	CERAMIC 50V 22P	1	
C4635		ECQB1H332JH	MYLAR 50V 3300P	1	
C4636		ECEA1EK3R3	ELECTROLYTIC 25V 3.3	1	
C4637		ECQB1H332KH	MYLAR 50V 3300P	1	
C4639		ECEA1AK220	ELECTROLYTIC 10V 22	1	
C4640		ECEA1AK220	ELECTROLYTIC 10V 22	1	
C4641		ECKF1H331KB	CERAMIC 50V 330P	1	
C4642		ECKF1H331KB	CERAMIC 50V 330P	1	
C4643		ECEA0JK470	ELECTROLYTIC 6.3V 47	1	
C4644		ECEA0JK470	ELECTROLYTIC 6.3V 47	1	
C4645		ECEA1HKN010	ELECTROLYTIC 50V 1	1	
C4646		ECEA0JK220	ELECTROLYTIC 6.3V 22	1	
C4647		ECEA1CK330	ELECTROLYTIC 16V 33	1	
C4648		ECEA1CK470	ELECTROLYTIC 16V 47	1	
C4649		ECEA10Z100	ELECTROLYTIC 10V 10	1	
C4650		ECEA10Z100	ELECTROLYTIC 10V 10	1	
C4651		ECEA1HKR47	ELECTROLYTIC 50V 0.47	1	
C4654		ECEA1HK2R2	ELECTROLYTIC 50V 2.2	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			COILS		
L4502		VLQEL05F121K	120UH	1	
L4504		VLQEL05F101K	100UH	1	
L4505		VLQEL05F101K	100UH	1	
L4506		VLP0017		1	
L4507		VLP0017		1	
L4508		VLQEL05F101K	100UH	1	
L4510		VLQEL05F330K	33UH	1	
L4511		VLQEL05F101K	100UH	1	
			FILTERS		
FL4501		ELB5F098		1	OR VLF0334
FL4502		ELB5F099		1	OR VLF0335
FL4503		VLF0336		1	
FL4504		VLF0336		1	
			CONNECTORS		
P4501		VJS1456		1	
P4502		VJP1246T	6P	1	
P4503		VJP1245T	5P	1	
P4505		VJP1231R	4P	1	
P4506		VJP1233T	6P	1	
P4507		VJP1250T	10P	1	
P4508		VJP1245T	5P	1	
			MISCELLANEOUS		
		VSC1274	SHILELD CASE (TOP)	1	
		VSC1275	SHILELD CASE (MAIN)	1	
		VSC1276	SHILELD CASE (BOTTOM)	1	
	■	VEP04130A	AUDIO INTERFACE C.B.A.		
			TRANSISTORS		
Q4801		2SD636		1	(Q,R,S)
Q4802		2SD636		1	(Q,R,S)
Q4803		2SD636		1	(Q,R,S)
Q4804		2SD636		1	(R,S)
Q4805		2SD636		1	(Q,R,S)
Q4806		2SB641		1	(Q,R,S)
Q4807		2SD636		1	(R,S)
Q4808		2SD636		1	(Q,R,S)
			DIODES		
D4801		MA165		1	
D4802		RD9.1EW	ZENER	1	
			RESISTORS		
R4801		ERDS2TJ473	47K	1	
R4802		ERDS2TJ473	47K	1	
R4803		ERDS2TJ393	39K	1	
R4804		ERDS2TJ473	47K	1	
R4805		ERDS2TJ104	100K	1	
R4806		ERDS2TJ103	10K	1	
R4807		ERDS2TJ562	5.6K	1	
R4808		ERDS2TJ473	47K	1	
R4809		ERDS2TJ104	100K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R4810		ERDS2TJ332	3.3K	1	
R4811		ERDS2TJ222	2.2K	1	
R4812		ERDS2TJ122	1.2K	1	
R4813		ERDS2TJ104	100K	1	
R4814		ERDS2TJ473	47K	1	
R4815		ERDS2TJ272	2.7K	1	
R4816		ERDS2TJ392	3.9K	1	
R4817		ERDS2TJ331	330	1	
R4818		ERDS2TJ561	560	1	
R4819		ERDS2TJ104	100K	1	
R4820		ERDS2TJ154	150K	1	
R4821		ERDS2TJ154	150K	1	
R4822		ERDS2TJ821	820	1	
R4823		ERDS2TJ392	3.9K	1	
R4825		ERDS2TJ331	330	1	
R4826		ERDS2TJ102	1K	1	
R4827		ERDS2TJ104	100K	1	
R4828		ERDS2TJ102	1K	1	
R4829		ERDS2TJ124	120K	1	
R4830		ERDS2TJ393	39K	1	
R4831		ERDS2TJ562	5.6K	1	
R4832		ERDS2TJ104	100K	1	
R4833		ERDS2TJ104	100K	1	
R4834		ERDS2TJ104	100K	1	
R4835		ERDS2TJ472	4.7K	1	
R4836		ERDS2TJ561	560	1	
			VARIABLE RESISTOR		
VR4801		EVNK6AA00B33	VARIABLE 3K	1	
			CAPACITORS		
C4801		ECEA1HK010	ELECTROLYTIC 50V 1	1	
C4802		ECEA1EK4R7	ELECTROLYTIC 25V 4.7	1	
C4803		ECEA1CK220	ELECTROLYTIC 16V 22	1	
C4804		ECEA1CK470	ELECTROLYTIC 16V 47	1	
C4805		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C4806		ECEA1CK470	ELECTROLYTIC 16V 47	1	
C4807		ECQB1H183JH	MYLAR 50V 0.018	1	
C4808		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C4809		ECQB1H393JH	MYLAR 50V 0.039	1	
C4810		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C4811		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C4812		ECKF1H121KB	CERAMIC 50V 120P	1	
C4813		ECQB1H562JH	MYLAR 50V 5600P	1	
C4814		ECEA1CU471	ELECTROLYTIC 16V 470	1	
C4815		ECEA1HK010	ELECTROLYTIC 50V 1	1	
C4816		ECEA1EK3R3	ELECTROLYTIC 25V 3.3	1	
C4817		ECEA1CK470	ELECTROLYTIC 16V 47	1	
C4818		ECEA1HK010	ELECTROLYTIC 50V 1	1	
			FILTER		
FL4801		VLF0400		1	
			CONNECTORS		
P4801		VJP1230T	3P	1	
P4802		VJP1232T	5P	1	
P4804		VJP1229R	2P	1	
P4805		VJP1229T	2P	1	
	■	VEP05076A	HEAD AMP C.B.A.		

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			INTEGRATED CIRCUIT		
IC501		AN3310K		1	
			TRANSISTORS		
Q501		2SC2188		1	
Q502		2SD636		1	(Q,R,S)
					OR 2SC2021M (Q,R,S)
Q503		2SB641		1	(Q,R,S)
					OR 2SA937M (Q,R,S)
Q504		2SD636		1	(Q,R,S)
					OR 2SC2021M (Q,R,S)
Q505		2SB641		1	(Q,R,S)
					OR 2SA937M (Q,R,S)
Q506		2SB641		1	(Q,R,S)
					OR 2SA937M (Q,R,S)
Q507		2SD638		1	(Q,R,S)
Q508		2SD638		1	(Q,R,S)
Q509		2SD638		1	(Q,R,S)
Q510		2SD638		1	(Q,R,S)
Q511		2SD638		1	(Q,R,S)
Q512		2SD638		1	(Q,R,S)
Q513		2SD636		1	(Q,R,S)
					OR 2SC2021M (Q,R,S)
Q514		2SC2188		1	
Q515		2SD636		1	(Q,R,S)
					OR 2SC2021M (Q,R,S)
			COMBINATION PARTS		
			(TRANSISTOR & RESISTOR)		
QR501		UN1215		1	
QR502		DTC124EA		1	OR UN1212
			RESISTORS		
R502		ERDS2TJ102	1K	1	
R503		ERDS2TJ102	1K	1	
R504		ERDS2TJ222	2.2K	1	
R505		ERDS2TJ183	18K	1	
R506		ERDS2TJ152	1.5K	1	
R507		ERDS2TJ560	56	1	
R508		ERDS2TJ221	220	1	
R509		ERDS2TJ222	2.2K	1	
R510		ERDS2TJ102	1K	1	
R511		ERDS2TJ102	1K	1	
R512		ERDS2TJ220	22	1	
R513		ERDS2TJ332	3.3K	1	
R514		ERDS2TJ332	3.3K	1	
R515		ERDS2TJ102	1K	1	
R516		ERDS2TJ220	22	1	
R517		ERDS2TJ102	1K	1	
R518		ERDS2TJ102	1K	1	
R519		ERDS2TJ102	1K	1	
R520		ERDS2TJ102	1K	1	
R521		ERDS2TJ100	10	1	
R522		ERDS2TJ122	1.2K	1	
R523		ERDS2TJ122	1.2K	1	
R524		ERDS2TJ100	10	1	
R525		ERDS2TJ100	10	1	
R526		ERDS2TJ682	6.8K	1	
R527		ERDS2TJ122	1.2K	1	
R528		ERDS2TJ122	1.2K	1	
R529		ERDS2TJ822	8.2K	1	
R530		ERDS2TJ100	10	1	
R531		ERDS2TJ821	820	1	
R532		ERDS2TJ821	820	1	
R533		ERDS2TJ821	820	1	
R534		ERDS2TJ821	820	1	
R535		ERDS2TJ152	1.5K	1	
R536		ERDS2TJ122	1.2K	1	
R537		ERDS2TJ681	680	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R538		ERDS2TJ152	1.5K	1	
R539		ERDS2TJ102	1K	1	
R540		ERDS2TJ102	1K	1	
R541		ERDS2TJ151	150	1	
R542		ERDS2TJ562	5.6K	1	
R543		ERDS2TJ222	2.2K	1	
R544		ERDS2TJ334	330K	1	
R545		ERDS2TJ471	470	1	
			VARIABLE RESISTORS		
VR501		EVN38CA00B23	VARIABLE 2K	1	
VR502		EVN38CA00B53	VARIABLE 5K	1	
			CAPACITORS		
C502		ECCF1H470J	CERAMIC 50V 47P	1	OR ECCF1H470K
C503		ECKF1H331KB	CERAMIC 50V 330P	1	
C504		ECEA1CK470	ELECTROLYTIC 16V 47	1	
C505		ECCF1H270J	CERAMIC 50V 27P	1	
C506		ECCF1H560J	CERAMIC 50V 56P	1	
C507		ECKF1H103ZF	CERAMIC 50V 0.01	1	
C508		ECKF1H103ZF	CERAMIC 50V 0.01	1	
C509		ECKF1H103ZF	CERAMIC 50V 0.01	1	
C510		VCYF1C104MR1	SEMICONDUCTOR 16V 0.1	1	
C511		ECKF1H103ZF	CERAMIC 50V 0.01	1	
C512		VCYF1C104MR1	SEMICONDUCTOR 16V 0.1	1	
C513		ECEA1CKS100	ELECTROLYTIC 16V 10	1	
C514		ECKF1H103ZF	CERAMIC 50V 0.01	1	
C515		ECKF1H103ZF	CERAMIC 50V 0.01	1	
C516		ECEA1CKS100	ELECTROLYTIC 16V 10	1	
C517		ECEA1CKS100	ELECTROLYTIC 16V 10	1	
C518		ECKF1H103ZF	CERAMIC 50V 0.01	1	
C519		ECKF1H103ZF	CERAMIC 50V 0.01	1	
C520		ECEA1CKS100	ELECTROLYTIC 16V 10	1	
C521		VCYF1C104MR1	SEMICONDUCTOR 16V 0.1	1	
C522		VCYF1C104MR1	SEMICONDUCTOR 16V 0.1	1	
C523		VCYF1C223MR1	SEMICONDUCTOR 16V 0.022	1	
C524		ECKF1H103ZF	CERAMIC 50V 0.01	1	
C525		ECKF1H103ZF	CERAMIC 50V 0.01	1	
C526		ECCF1H220J	CERAMIC 50V 22P	1	OR ECCF1H220K
C527		ECEA0JK470	ELECTROLYTIC 6.3V 47	1	
C528		ECCF1H470J	CERAMIC 50V 47P	1	OR ECCF1H470K
C529		VCKF1H431JA	SEMICONDUCTOR 50V 430P	1	
C530		ECCF1H820J	CERAMIC 50V 82P	1	
C531		ECEA1HK010	ELECTROLYTIC 50V 1	1	
C532		ECCF1H100FC	CERAMIC 50V 10P	1	
C533		ECKF1H103ZF	CERAMIC 50V 0.01	1	
C534		ECKF1H103ZF	CERAMIC 50V 0.01	1	
C535		ECKF1H103ZF	CERAMIC 50V 0.01	1	
C536		ECCF1H150JC	CERAMIC 50V 15P	1	OR ECCF1H150KC
C537		ECCF1H150JC	CERAMIC 50V 15P	1	OR ECCF1H150KC
C538		ECCF1H150JC	CERAMIC 50V 15P	1	OR ECCF1H150KC
C539		ECCF1H150JC	CERAMIC 50V 15P	1	OR ECCF1H150KC
C540		ECKF1H102KB	CERAMIC 50V 1000P	1	
			COILS		
L501		VLQEL05F101K	100UH	1	
L502		VLQEL05F820K	82UH	1	
L503		VLQEL05F181K	180UH	1	
L504		VLQEL05F150K	15UH	1	
L505		VLQEL05F101K	100UH	1	
L506		VLQEL05F151K	150UH	1	
L507		VLQEL05F330K	33UH	1	
L508		VLQEL05F470K	47UH	1	
L509		VLQEL05F150J	15UH	1	
L510		VLP0017		1	
L511		VLP0017		1	
L512		VLP0017		1	
L513		VLQ0127		1	
L514		VLQEL05F330K	33UH	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			CONNECTORS		
P501		VJP1248T	8P	1	
P502		VJP1248R	8P	1	
P503		VJP1235T	8P	1	
			MISCELLANEOUS		
		VGQ0474	TUNER HOLDER	1	
		VSC1279	SHILELD CASE (TOP)	1	
		VSC1280	SHILELD CASE (MAIN)	1	
		VSC1281	SHILELD CASE (BOTTOM)	1	
	■	VEP06298A	OPERATION C.B.A.		
			INTEGRATED CIRCUITS		
IC6502		BA6800		1	
IC6503		UPD7537CU207		1	
			TRANSISTORS		
Q6501		2SB641		1	(Q,R,S) OR 2SA937M (Q,R,S)
Q6502		2SD638		1	(Q,R,S)
			COMBINATION PARTS (TRANSISTOR & RESISTOR)		
QR6501		DTA124EA		1	OR UN1112
QR6502		DTA124EA		1	OR UN1112
QR6503		DTA124EA		1	OR UN1112
QR6504		DTA124EA		1	OR UN1112
QR6505		DTC124EA		1	OR UN1212
QR6506		DTA124EA		1	OR UN1112
QR6507		DTA124EA		1	OR UN1112
QR6508		DTA124EA		1	OR UN1112
QR6509		DTC124EA		1	OR UN1212
			DIODES		
D6503		LN81RCPHL	LED	1	
D6504		MA165		1	OR 1SS119,1SS133
D6505		RD9.1EB	ZENER	1	
D6506		MA4075		1	
D6507		MA165		1	OR 1SS119,1SS133
D6508		MA165		1	OR 1SS119,1SS133
D6510		MA165		1	OR 1SS119,1SS133
D6511		MA165		1	OR 1SS119,1SS133
D6512		LN838RPH	LED	1	
D6513		LN838RPH	LED	1	
D6514		LN838RPH	LED	1	
D6521		MA4056		1	
			RESISTORS		
R6501		ERDS2TJ183	18K	1	
R6502		ERDS2TJ473	47K	1	
R6503		ERDS2TJ473	47K	1	
R6504		ERDS2TJ473	47K	1	
R6506		ERDS2TJ473	47K	1	
R6507		ERDS2TJ102	1K	1	
R6509		ERDS2TJ102	1K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R6510		ERDS2TJ184	180K	1	
R6511		ERDS2TJ103	10K	1	
R6512		ERDS2TJ103	10K	1	
R6513		ERDS2TJ563	56K	1	
R6514		ERDS2TJ330	33	1	
R6515		ERDS2TJ330	33	1	
R6516		ERDS2TJ104	100K	1	
R6517		ERDS2TJ562	5.6K	1	
R6518		ERDS2TJ103	10K	1	
R6521		ERDS2TJ122	1.2K	1	
			RESISTOR ARRAYS		
RX6501		EXBP88104K		1	
RX6502		EXBP88104K		1	
RX6503		EXBP88104K		1	
			VARIABLE RESISTORS		
VR6502		EWAKF6X09B15	VARIABLE 100K	1	
VR6503		EWAKF6X09B15	VARIABLE 100K	1	
VR6504		EWAKF7X09B24	VARIABLE 20K	1	
VR6505		EWAKAAX09B24	VARIABLE 20K	1	
VR6506		EVN38CA00B24	VARIABLE 20K	1	
VR6507		EVN3ACA00B53	VARIABLE 5K	1	
VR6508		EVN3ACA00B53	VARIABLE 5K	1	
			CAPACITORS		
C6501		ECQB1H153KH	MYLAR 50V 0.015	1	
C6502		ECEA0JKS330	ELECTROLYTIC 6.3V 33	1	
C6503		ECEA1CKS100	ELECTROLYTIC 16V 10	1	
C6504		ECEA1EK4R7	ELECTROLYTIC 25V 4.7	1	
C6505		ECEA1VKS4R7	ELECTROLYTIC 35V 4.7	1	
C6506		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C6508		ECEA1HKS0R1	ELECTROLYTIC 50V 0.1	1	
C6509		ECKF1H471KB	CERAMIC 50V 470P	1	
C6510		ECKF1H471KB	CERAMIC 50V 470P	1	
C6512		ECEA0JKS101	ELECTROLYTIC 6.3V 100	1	
			COIL		
L6501		VLQEL05F101K	100UH	1	
			FILTER		
FL6501		VSL0051		1	
			CRYSTAL OSCILLATOR		
X6510		VSX0143		1	OR VSX0144
			SWITCHES		
S6501		EVQQS307K		1	
S6502		EVQQS307K		1	
S6503		EVQQS307K		1	
S6504		EVQQS307K		1	
S6505		EVQQS307K		1	
S6506		EVQQS307K		1	
S6507		ESD14181		1	
S6508		ESD14182		1	
			CONNECTORS		
P6501		VJP1233R	6P	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
P6502		VJP1235T	8P	1	
P6503		VJP1234T	7P	1	
P6504		VJP1229T	2P	1	
P6505		VJP1232T	5P	1	
P6506		VJP1250T	10P	1	
P6507		VJP1230T	3P	1	
P6508		VJP1231T	4P	1	
			MISCELLANEOUS		
		KL04	LED HOLDER	1	
		VJF0242	FIP HOLDER (R)	1	
		VJF0243	FIP HOLDER (L)	1	
		VMX0874	LED SPACER	1	
	■	VEP07275A	TIMER C.B.A.		
			INTEGRATED CIRCUITS		
IC7501		MN1455BVLK		1	
IC7503		MN1512VQF		1	
IC7504		MN1219		1	
IC7505		AN5033		1	
IC7506		MN1280P		1	
IC7507		AN5421		1	
IC7508		UPD4050BC		1	OR MN4050B
IC7509		AN6913		1	
IC7510		UPD4066BC		1	OR MN4066B
			TRANSISTORS		
Q7507		2SB644		1	(Q,R,S)
Q7508		2SB644		1	(Q,R,S)
Q7510		2SD637		1	(Q,R,S)
Q7522		2SA794		1	(Q,S)
Q7523		2SD636		1	(Q,R,S)
Q7550		2SD636		1	(Q,R,S)
Q7554		2SD636		1	(Q,R,S)
Q7580		2SB641		1	(Q,R,S)
Q7581		2SD636		1	(Q,R,S)
			COMBINATION PARTS		
			(TRANSISTOR & RESISTOR)		
QR7501		DTC114EA		1	OR UN1211
QR7502		DTC144EA		1	OR UN1213
QR7511		DTA124EA		1	OR UN1112
QR7520		DTC114EA		1	OR UN1211
QR7551		DTC144EA		1	OR UN1213
QR7552		DTC144EA		1	OR UN1213
			DIODES		
D7501		MA165		1	OR 1SS133
D7502		MA165		1	OR 1SS133
D7506		10E1		1	OR ERB1201G1
D7509		MA27WB		1	
D7510		LN28WP.VT	LED	1	
D7511		MA165		1	OR 1SS133
D7512		10E1		1	
D7514		MA165		1	OR 1SS133
D7515		MA165		1	OR 1SS133
D7521		MA165		1	OR 1SS133
D7522		MA165		1	OR 1SS133
D7524		MA165		1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
D7529		LN28RCPP	LED	1	
D7530		LN28RCPP	LED	1	
D7531		LN28RCPP	LED	1	
D7532		LN28RCPP	LED	1	
D7533		LN28RCPP	LED	1	
D7540		MA165		1	OR 1SS133
D7541		MA165		1	OR 1SS133
D7542		10E1		1	
D7553		MA165		1	OR 1SS133
D7554		MA4130L		1	
D7555		MA4300H		1	
D7556		MA4075L		1	OR MA4075MTA
D7560		MA27TB		1	
D7567		MA165		1	OR 1SS133
D7587		MA165		1	OR 1SS133
			RESISTORS		
R7501		ERDS2TJ122	1.2K	1	
R7502		ERC14GJ126	METAL 12M	1	
R7503		ERDS2TJ102	1K	1	
R7505		ERDS2TJ223	22K	1	
R7506		ERDS2TJ223	22K	1	
R7507		ERDS2TJ181	180	1	
R7508		ERDS2TJ331	330	1	
R7509		ERDS2TJ102	1K	1	
R7510		ERDS2TJ472	4.7K	1	
R7511		ERDS2TJ472	4.7K	1	
R7512		ERDS2TJ152	1.5K	1	
R7513		ERDS2TJ152	1.5K	1	
R7514		ERDS2TJ102	1K	1	
R7515		ERDS2TJ273	27K	1	
R7516		ERDS2TJ473	47K	1	
R7517		ERDS2TJ273	27K	1	
R7518		ERDS2TJ273	27K	1	
R7519		ERDS2TJ273	27K	1	
R7520		ERDS2TJ102	1K	1	
R7521		ERDS2TJ222	2.2K	1	
R7522		ERDS2TJ221	220	1	
R7523		ERDS2TJ221	220	1	
R7524		ERDS2TJ221	220	1	
R7525		ERDS2TJ221	220	1	
R7526		ERDS2TJ104	100K	1	
R7527		ERDS2TJ104	100K	1	
R7528		ERDS2TJ103	10K	1	
R7529		ERDS2TJ473	47K	1	
R7530		ERDS2TJ104	100K	1	
R7531		ERDS2TJ124	120K	1	
R7535		EVNK6AA00B14	VARIABLE 10K	1	OR EVN61AA00B14
R7539		ERDS2TJ390	39	1	
R7540		ERDS2TJ820	82	1	
R7541		ERDS2TJ333	33K	1	
R7542		ERDS2TJ473	47K	1	
R7546		ERDS2TJ273	27K	1	
R7547		ERDS2TJ104	100K	1	
R7548		ERDS2TJ332	3.3K	1	
R7550		ERD2FCG270	FUSE 27	1	<!>
R7551		ERDS2TJ332	3.3K	1	
R7554		ERDS2TJ473	47K	1	
R7555		ERDS2TJ221	220	1	
R7556		ERDS2TJ105	1M	1	
R7560		ERDS2TJ222	2.2K	1	
R7566		ERDS2TJ102	1K	1	
R7570		ERDS2TJ332	3.3K	1	
R7571		ERDS2TJ102	1K	1	
R7575		ERDS2TJ334	330K	1	
R7576		ERDS2TJ223	22K	1	
R7577		ERDS2TJ473	47K	1	
R7583		ERDS2TJ473	47K	1	
R7584		ERDS2TJ334	330K	1	
R7585		ERDS2TJ124	120K	1	
R7586		ERDS2TJ473	47K	1	
R7590		ERDS2TJ101	100	1	
R7591		ERDS2TJ471	470	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R7592		ERDS2TJ562	5.6K	1	
R7593		ERDS2TJ151	150	1	
R7594		ERDS2TJ472	4.7K	1	
R7595		ERDS2TJ104	100K	1	
R7596		EVMK3GA00B23	2K	1	
R7597		ERDS2TJ562	5.6K	1	
R7598		ERDS2TJ393	39K	1	
R7599		ERDS2TJ222	2.2K	1	
R7600		ERDS2TJ393	39K	1	
R7601		ERDS2TJ472	4.7K	1	
R7602		ERDS2TJ681	680	1	
R7603		ERDS2TJ681	680	1	
R7604		ERDS2TJ681	680	1	
R7605		ERDS2TJ681	680	1	
R7606		ERDS2TJ681	680	1	
R7607		ERDS2TJ223	22K	1	
R7608		ERDS2TJ473	47K	1	
R7609		ERDS2TJ473	47K	1	
R7610		ERDS2TJ333	33K	1	
R7611		ERDS2TJ333	33K	1	
R7616		ERDS2TJ103	10K	1	
R7617		ERDS2TJ472	4.7K	1	
R7618		ERDS2TJ103	10K	1	
R7619		ERDS2TJ822	8.2K	1	
R7620		ERDS2TJ332	3.3K	1	
R7624		ERDS2TJ472	4.7K	1	
R7625		ERDS2TJ472	4.7K	1	
R7650		ERDS2TJ181	180	1	
R7651		ERDS2TJ181	180	1	
R7652		ERDS2TJ104	100K	1	
			CAPACITORS		
C7501		ECCF1H150JC	CERAMIC 50V 15P	1	
C7502		ECV1ZW20X53T	TRIMMER 500V 20P	1	
C7503		ECCF1H050CC	CERAMIC 50V 5P	1	
C7504		ECCF1H330JC	CERAMIC 50V 33P	1	
C7505		ECCF1H220JC	CERAMIC 50V 22P	1	
C7506		ECQB1H104JH	MYLAR 50V 0.1	1	
C7508		ECEA1HKR22	ELECTROLYTIC 50V 0.22	1	
C7509		ECEA1AK330	ELECTROLYTIC 10V 33	1	
C7510		ECEA1AK101	ELECTROLYTIC 10V 100	1	
C7511		ECKF1H103ZF	CERAMIC 50V 0.01	1	
C7513		ECCF1H470J	CERAMIC 50V 47P	1	
C7514		ECCF1H470J	CERAMIC 50V 47P	1	
C7515		ECQB1H104JH	MYLAR 50V 0.1	1	
C7516		ECQB1H683JH	MYLAR 50V 0.068	1	
C7517		ECQB1H273JH	MYLAR 50V 0.027	1	
C7518		ECQB1H823JH	MYLAR 50V 0.082	1	
C7519		ECQB1H103JH	MYLAR 50V 0.01	1	
C7520		ECKF1H103ZF	CERAMIC 50V 0.01	1	
C7521		ECKF1H103ZF	CERAMIC 50V 0.01	1	
C7523		ECEA1HK010	ELECTROLYTIC 50V 1	1	
C7524		ECKF1H103ZF	CERAMIC 50V 0.01	1	
C7527		ECEA1HK100	ELECTROLYTIC 50V 10	1	
C7528		ECQB1H473JH	MYLAR 50V 0.047	1	
C7530		ECQB1H104JH	MYLAR 50V 0.1	1	
C7532		ECEA1HK010	ELECTROLYTIC 50V 1	1	
C7540		EECW2R3A3R3	GOLD 2.3V 3.3F	1	
C7541		EECW2R3A3R3	GOLD 2.3V 3.3F	1	
C7542		EECW2R3A3R3	GOLD 2.3V 3.3F	1	
C7543		ECEA1HK010	ELECTROLYTIC 50V 1	1	
C7545		ECEA1CKN330	ELECTROLYTIC 16V 33	1	
C7546		ECQB1H103JH	MYLAR 50V 0.01	1	
C7547		ECQB1H392JH	MYLAR 50V 3900P	1	
C7548		ECEA1HK010	ELECTROLYTIC 50V 1	1	
C7549		ECEA1HK010	ELECTROLYTIC 50V 1	1	
C7551		ECKF1H103ZF	CERAMIC 50V 0.01	1	
C7552		ECKF1H103ZF	CERAMIC 50V 0.01	1	
C7553		ECKF1H103ZF	CERAMIC 50V 0.01	1	
C7554		ECKF1H103ZF	CERAMIC 50V 0.01	1	
C7560		ECEA1HK010	ELECTROLYTIC 50V 1	1	
C7561		ECQV1H104JZ	MYLAR 50V 0.1	1	
C7586		ECQB1H102JH	MYLAR 50V 1000P	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C7587		ECEA1CK470	ELECTROLYTIC 16V 47	1	
C7589		ECQB1H272JH	MYLAR 50V 2700P	1	
C7590		ECQP1562JZ	MYLAR 100V 5600P	1	
C7592		ECKF1H103ZF	CERAMIC 50V 0.01	1	
			COIL		
L7501		VLQEL05F102K	1000UH	1	
			CRYSTAL OSCILLATORS		
X7501		VSX0071		1	
X7502		VSX0094		1	
X7503		VSX0082		1	OR VSX0128
			SWITCHES		
SW7516		EVQQS307K		1	
SW7517		EVQQS307K		1	
SW7518		EVQQS307K		1	
SW7519		EVQQS307K		1	
SW7520		EVQQS307K		1	
SW7521		EVQQS307K		1	
SW7522		EVQQS307K		1	
			CONNECTORS		
P7501		VJP1511T	11P	1	
P7502		VJP1235T	8P	1	
P7504		VJP1229T	2P	1	
P7505		VJP1230T	3P	1	
P7507		VJP1233T	6P	1	
P7508		VJP1232T	5P	1	
P7509		VJP1230T	3P	1	
P7511		VJP1230R	3P	1	
			MISCELLANEOUS		
		VGQ0457	LED SPACER	5	
	■	VEP07276A	TIMER OPERATION C.B.A.		
			INCLUDING THE IR RECEIVER		
			C.B.		
			INTEGRATED CIRCUITS		
IC7502		AN6873N		1	OR MSL915RS
IC7580		UPC1373H		1	OR UPC1373HA
			COMBINATION PARTS		
			(TRANSISTOR & RESISTOR)		
QR7513		DTA124EA		1	OR UN1112
QR7514		DTA124EA		1	OR UN1112
QR7515		DTA124EA		1	OR UN1112
			DIODES		
D7516		MA165		1	OR 1SS133
D7517		MA165		1	OR 1SS133

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
D7518		MA165		1	OR 1SS133
D7519		MA165		1	OR 1SS133
D7525		MA165		1	OR 1SS133
D7539		MA165		1	OR 1SS133
D7581		MA165		1	OR 1SS133
D7588		MA165		1	OR 1SS133
			RESISTORS		
R7504		ERDS2TJ102	1K	1	
R7553		ERDS2TJ470	47	1	
R7557		ERDS2TJ473	47K	1	
R7558		ERDS2TJ473	47K	1	
R7559		ERDS2TJ473	47K	1	
R7580		ERDS2TJ224	220K	1	
R7581		ERDS2TJ560	56	1	
R7582		ERDS2TJ102	1K	1	
R7621		VRV0030	VARIABLE	1	
R7640		ERDS2TJ623	62K	1	
R7641		ERDS2TJ333	33K	1	
R7642		ERDS2TJ183	18K	1	
R7643		ERDS2TJ822	8.2K	1	
R7644		ERDS2TJ472	4.7K	1	
R7645		ERDS2TJ272	2.7K	1	
R7646		ERDS2TJ122	1.2K	1	
R7647		ERDS2TJ681	680	1	
R7648		ERDS2TJ301	300	1	
R7649		ERDS2TJ391	390	1	
			CAPACITORS		
C7580		ECQB1H183JH	MYLAR 50V 0.018	1	
C7581		ECQP1182JZ	MYLAR 100V 1800P	1	
C7582		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C7583		ECEA1EK4R7	ELECTROLYTIC 25V 4.7	1	
C7584		ECEA1CK470	ELECTROLYTIC 16V 47	1	
C7585		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C7588		ECKF1H331KB	CERAMIC 50V 330P	1	
			TRANSFORMER		
T7580		ELM7Q206A		1	
			SWICTHES		
SW7501		EVQQS307K		1	
SW7504		ESD14182		1	
SW7505		EVQQS307K		1	
SW7506		EVQQS307K		1	
SW7507		EVQQS307K		1	
SW7508		EVQQS307K		1	
SW7510		EVQQS307K		1	
SW7512		EVQQS307K		1	
SW7513		EVQQS307K		1	
SW7514		ESD14181		1	
SW7523		EVQQS307K		1	
SW7524		EVQQS307K		1	
SW7530		EVQQS307K		1	
SW7531		EVQQS307K		1	
SW7532		EVQQS307K		1	
SW7533		EVQQS307K		1	
SW7534		EVQQS307K		1	
SW7535		EVQQS307K		1	
SW7536		EVQQS307K		1	
SW7537		EVQQS307K		1	
SW7538		EVQQS307K		1	
SW7539		EVQQS307K		1	
SW7540		EVQQS307K		1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			CONNECTORS		
P7510		VJP1246T	6P	1	
			DISPLAY TUBE		
DP7501		VSL0049		1	
			MISCELLANEOUS		
		VJF0240	FIP HOLDER (R)	1	
		VJF0241	FIP HOLDER (L)	1	
		VMX0781	FIP SPACER	2	
		VSC1268	SHILELD CASE (TOP)	1	
		VSC1269	SHILELD CASE (MAIN)	1	
		VSC1270	SHILELD CASE (BOTTOM)	1	
		VSC1294	IR FILTER	1	
	■	VEB0114A1	TV DEMODULATOR C.B.A.		
			(TV DEMODULATOR SECTION)		
			VARIABLE RESISTORS	1	
VR701		EVNE4AA00B23	VARIABLE 2K	1	OR VRV0020
VR702		EVNE4AA00B23	VARIABLE 2K	1	OR VRV0020
VR751		EVNE4AA00B24	VARIABLE 20K	1	OR VRV0022
			INTEGRATED CIRCUITS		
IC701		AN5125		1	
IC751		AN5215		1	
			TRANSISTORS		
Q701		2SC1047		1	(C) OR 2SC2377 (C)
Q702		2SB641		1	(Q,R,S,T) OR 2SA564
					(Q,R,S,T),2SA733 (Q
Q703		2SD636		1	R,S,T)(S,T) OR 2SD
Q761		2SD636		1	637 (S,T) (Q,R,S,T)
					OR 2SD637 2SC945A
					2SC1684 2SC1685
			DIODES		
D711		MA165		1	
D712		MA165		1	
D761		MA27WA		1	OR MA27WB
			RESISTORS		
R713		ERDS2TJ222	2.2K	1	
R716		ERDS2TJ222	2.2K	1	
R721		ERDS2TJ682	6.8K	1	
R722		ERDS2TJ564	560K	1	
R723		ERDS2TJ681	680	1	
R724		ERD2FCG330	FUSE 33	1	<!>
R725		ERDS2TJ271	270	1	
R726		ERDS2TJ272	2.7K	1	
R727		ERDS2TJ331	330	1	
R733		ERDS2TJ102	1K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R734		ERDS2TJ683	68K	1	
R736		ERDS2TJ470	47	1	
R737		ERDS2TJ184	180K	1	
R739		ERDS2TJ561	560	1	
R740		ERDS2TJ222	2.2K	1	
R741		ERDS2TJ221	220	1	
R742		EROS2CKG1001	METAL 1K	1	
R743		EROS2CKG8200	METAL 820	1	
R744		ERDS2TJ822	8.2K	1	
R745		ERDS2TJ680	68	1	
R746		ERDS2TJ151	150	1	
R747		ERDS2TJ102	1K	1	
R748		ERDS2TJ390	39	1	
R751		ERDS2TJ471	470	1	
R752		ERD2FCG220	FUSE 22	1	<!>
R753		ERDS2TJ152	1.5K	1	
R761		ERDS2TJ102	1K	1	
R762		ERDS2TJ103	10K	1	
			CAPACITORS		
C710		ECKF1H103ZF	CERAMIC 50V 0.01	1	
C712		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C713		ECKF1H103ZF	CERAMIC 50V 0.01	1	
C714		ECEA1CK330	ELECTROLYTIC 16V 33	1	
C721		ECKF1H103ZF	CERAMIC 50V 0.01	1	
C722		ECKF1H103ZF	CERAMIC 50V 0.01	1	
C723		ECCF1H151JC	CERAMIC 50V 150P	1	
C725		ECKF1H103ZF	CERAMIC 50V 0.01	1	
C726		ECKF1H103ZF	CERAMIC 50V 0.01	1	
C727		ECQV1H563JZ	MYLAR 50V 0.056	1	
C728		ECEA1HK010	ELECTROLYTIC 50V 1	1	
C731		ECEA1HKR47	ELECTROLYTIC 50V 0.47	1	
C732		ECKF1H103ZF	CERAMIC 50V 0.01	1	
C733		ECCF1H040CC	CERAMIC 50V 4P	1	
C734		ECEA1HK010	ELECTROLYTIC 50V 1	1	
C737		ECKF1H103ZF	CERAMIC 50V 0.01	1	
C738		ECCF1H120JC	CERAMIC 50V 12P	1	
C739		ECCF1H560JR	CERAMIC 50V 56P	1	
C740		ECCF1H050CU	CERAMIC 50V 5P	1	
C741		ECCF1H390JR	CERAMIC 50V 39P	1	
C742		ECCF1H390JC	CERAMIC 50V 39P	1	
C752		ECCF1H050CC	CERAMIC 50V 5P	1	
C754		ECQV1H473JZ	MYLAR 50V 0.047	1	
C755		ECEA1CK470	ELECTROLYTIC 16V 47	1	
C756		ECCF1H270JP	CERAMIC 50V 27P	1	
C757		ECCF1H120JC	CERAMIC 50V 12P	1	
C758		ECEA1CK100	ELECTROLYTIC 16V 10	1	
			COILS		
L702		ELQS1R0KB		1	
L703		ELQSR68KB		1	
L704		VLQEL05F3R3K	3.3UH	1	
L706		VLQEL05F180K	18UH	1	
L707		VLQEL05F4R7K	4.7UH	1	
			COMBINATION PART		
			(CAPACITOR & RESISTOR)		
CR753		EXPP121K153S	120P 15K	1	
			TRANSFORMERS		
T701		EIV7EG006B		1	
T703		EIV7E016A		1	
T704		EIV7E018C		1	
T705		EIK7EG001B		1	
T751		EIS7E006A		1	
T752		EIS7EG009B		1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			CRYSTAL OSCILLATOR		
X701		EFCH45MVK2K		1	
X702		EFCS4R5MS4W		1	
X703		EFCS4R5MW3		1	OR VLF0181
			CONNECTORS		
P701		VJP1245T	5P	1	
P702		VJP1243T	3P	1	
			MISCELLANEOUS		
		VJF0052	BINDER	2	
		VSC1282	SHILELD CASE (TOP)	1	
		VSC1283	SHILELD CASE (BOTTOM)	1	
		VSC1339	SHILELD CASE (MAIN)	1	
			(TUNER SECTION)		
			DIODES		
D701		RD8.2JS3	ZENER	1	OR RD8.2JS2
D702		RD8.2JS3	ZENER	1	OR RD8.2JS2
			RESISTORS		
R701		ERDS2TJ123	12K	1	
R702		ERDS2TJ392	3.9K	1	
R703		ERDS2TJ182	1.8K	1	
R704		ERDS2TJ182	1.8K	1	
R705		ERDS2TJ272	2.7K	1	
R706		ERDS2TJ222	2.2K	1	
R707		ERDS2TJ102	1K	1	
R735		ERDS2TJ823	82K	1	
R763		ERDS2TJ222	2.2K	1	
			CAPACITORS		
C701		ECEA1CKS220	ELECTROLYTIC 16V 22	1	
C702		ECEA1EKS4R7	ELECTROLYTIC 25V 4.7	1	
C705		ECEA1CKS220	ELECTROLYTIC 16V 22	1	
C706		ECQV1H563JZ	MYLAR 50V 0.056	1	
C707		ECEA1HKS010	ELECTROLYTIC 50V 1	1	
C708		ECEA1CKS220	ELECTROLYTIC 16V 22	1	
C709		ECKF1H103ZF	CERAMIC 50V 0.01	1	
			COIL		
L701		VLQEL05F680K	68UH	1	
			CONNECTORS		
P703		VJP1251T	11P	1	
P704		VJP1148	2P	1	
			MISCELLANEOUS		
		TNV56464F2	TUNER	1	<!>

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
	■	ENC86709	RF CONVERTER & ANTENNA		<!>
			BOOSTER UNIT		
			TRANSISTORS		
Q11		2SC3120		1	OR 2SC2735,2SC3130,
					2SC3082,2SC2480
Q12		2SC3120		1	OR 2SC2735,2SC3130,
					2SC3082,2SC2480
Q13		2SC3120		1	OR 2SC2735,2SC3130,
					2SC3082,2SC2480
Q14		2SC3120		1	OR 2SC2735,2SC3130,
					2SC3082,2SC2480
			DIODE		
D1		MA1062	ZENER	1	OR HZ6C1,HZ6C2,
					RD62EB2T,MA4062
		VJB07281	PAY C.B.	1	
			DIODES		
D7701		MA4150M		1	
D7702		MA4150M		1	
			RESISTORS		
R7701		ERDS2TJ221	220	1	
R7702		ERDS2TJ221	220	1	
			CONNECTORS		
JK7701		VJS1647		1	
P7701		VJP1242T	2P	1	
P7702		VJP1149	3P	1	
	■	VJB00B21	HEAD PHONE JACK C.B.		
			JACK		
		VJJ0096		1	
	■	VJB00C40	SUPPLY PHOTO TR. C.B.		
			TRANSISTOR		
Q1502		PN150NV		1	
			CAPACITOR		
C1502		ECKF1H102KBN	CERAMIC 50V 1000P	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			MISCELLANEOUS		
		VMD0645	PHOTO TR. HOLDER	1	
	■	VJB00C48	LED C.B.		
			DIODE		
D1501		GL450	PHOTO DIODE	1	
			MISCELLANEOUS		
		VMD0644	LED HOLDER	1	
	■	VJB00D08	MECHANISM CONNECTION C.B.		
			CAPAITOR		
C1504		ECEA1HKN010	ELECTROLYTIC 50V 1	1	
			CONNECTORS		
P1511		VJP1245T	5P	1	
P1512		VJP1242T	2P	1	
P1513		VJP1511T	11P	1	
P1514		VJP1231T	4P	1	
P1515		VJP1229R	2P	1	
P1516		VJP1230T	3P	1	
	■	VJB00D10	FRONT LOADING C.B.		
			TRANSISTOR		
Q1503		PN150NV	PHOTO TR.	1	
			CAPACITOR		
C1503		ECKF1H102KBN	CERAMIC 50V 1000P	1	
			CONNECTOR		
P1510		VJP1247T	7P	1	
			MISCELLANEOUS		
		VMD0645	PHOTO TR. HOLDER	1	
	■	VJB00D11	REEL SENSOR C.B.		

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			PHOTO INTERRUPTER		
IC1501		ON2160		1	
			CONNECTOR		
P1518		VJP1229T	2P	1	
			MISCELLANEOUS		
		VMX0744	SENSOR SPACER	1	
	■	VJB00E36	CYLINDER HEATER C.B.		
			TRANSISTOR		
Q1501		2SD1273		1	<!>
			CAPACITOR		
C1501		ECKF1H681KB	CERAMIC 50V 680P	1	
			CONNECTOR		
P1506		VJP1243T	3P	1	
	■	VJB00E94	IR RECEIVER C.B.		
			DIODE		
D7580		PH302		1	OR PN313
			CONNECTOR		
P7580		VJP1400		1	
	■	VJB00F21	POWER TR. (2) C.B.		
			TRANSISTOR		
Q1506		2SD1275		1	(O,P,Q) <!>
			CONNECTOR		
P1503		VJP1230R	3P	1	
	■	VJB00F22	POWER TR. (3) C.B.		

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			TRANSISTOR		
Q1505		2SD1275		1	(O,P,Q) <!>
			CONNECTOR		
P1502		VJP1230T	3P	1	
	■	VJB00F89	POWER TR. (1) C.B.		
			TRANSISTOR		
Q1504		2SD1275		1	(O,P,Q) <!>
			CONNECTOR		
P1504		VJP1232T	5P	1	
			MISCELLANEOUS		
		VJS0039	FUSE HOLDER	2	
	■	VEP22021A	IR REMOTE CONTROLLER		
			C.B.A.		
			INTEGRATED CIRCUIT		
IC1		MN6030CA		1	
			TRANSISTOR		
Q1		2SD1458		1	
			DIODES		
D1		LN66S		1	OR SE303AY
D2		MA154WK		1	
D3		MA154WK		1	
			RESISTORS		
R1		ERDS2TJ102	1K	1	
R2		ERDS2TJ473	47K	1	
R3		ERDS2TJ1R0	1.0	1	
			CAPACITORS		
C1		ECKF1H101KB	CERAMIC 50V 100P	1	
C2		ECKF1H101KB	CERAMIC 50V 100P	1	
C3		ECEA0JK101	ELECTROLYTIC 6.3V 100	1	OR ECEA0GK101
			SWITCH		
SW1		ESD14126		1	
			CRYSTAL OSCILLATOR		
X1		CSB455EBIT		1	OR EFOA45505A1